

National Weather Service

Storm Spotter Training

Kelly Godsey

**Assistant Warning
Coordination Meteorologist**

NWS-Tallahassee



Presentation Topics

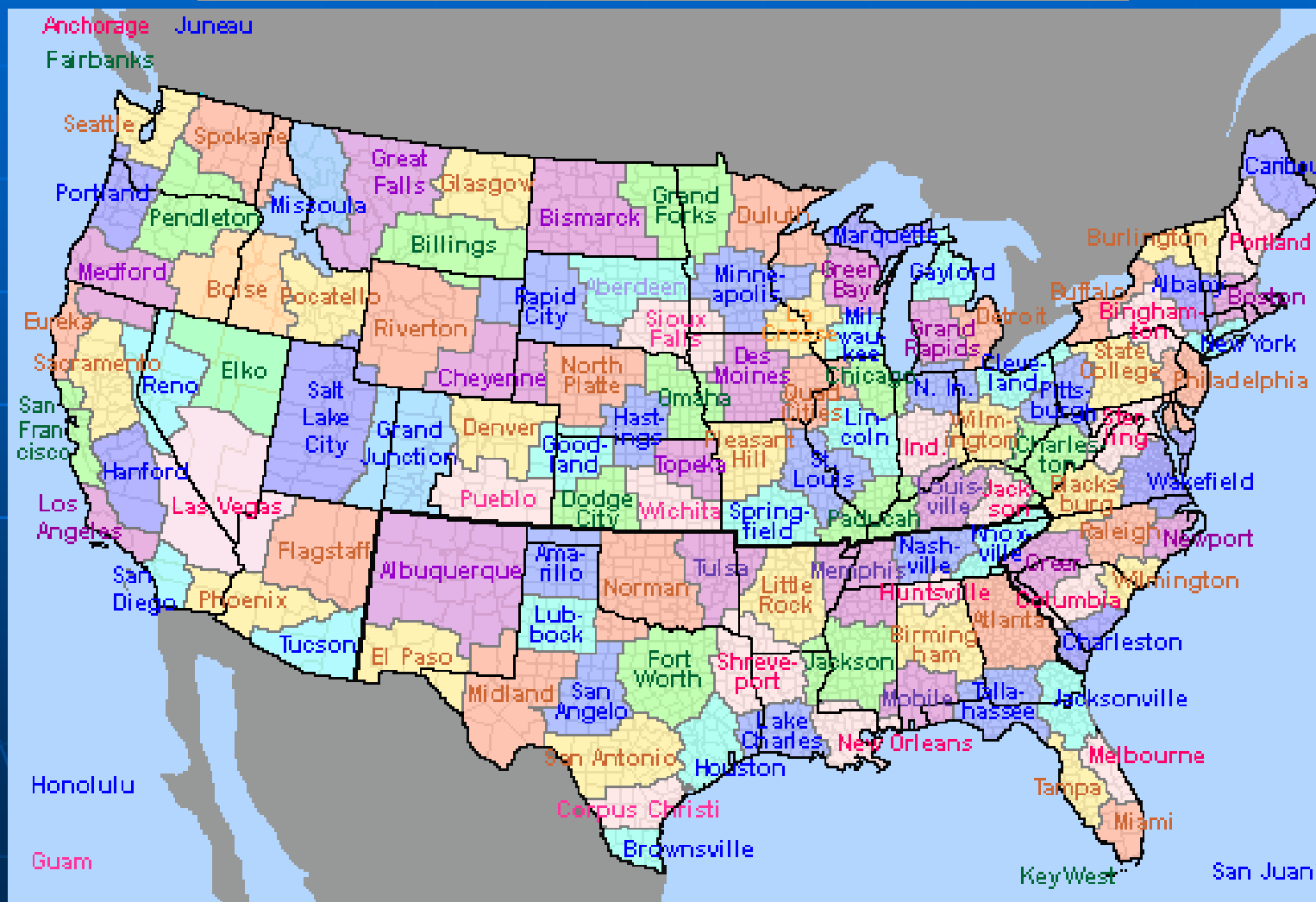
- ◆ National Weather Service overview, mission, and products
- ◆ Basic Storm Definitions
- ◆ What to report and what makes a good report
- ◆ Severe weather climatology
- ◆ Thunderstorm components common to the Southeast
- ◆ Tornado Look alike
- ◆ A case study on severe weather
- ◆ Tropical Weather
- ◆ Weather Safety

Register with us!

- Registering with NWS Tallahassee allows us to contact you if we need important information
- We like to have:
 - Name
 - Address
 - Phone Number
 - Email Address
 - Preferred hours of contact
- More information on registering will be provided at the end of the course
- Note: We only use this information to contact you for severe weather spotting. Submission of any contact information to us is completely voluntary!

www.weather.gov

Your source for official weather information
123 offices serving America & surrounding territories



National Weather Service county warning areas



Tallahassee, FL

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Organization

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NWS



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Marine Observations

Florida Weather

Georgia Weather

Alabama Weather

Radar Imagery

Nationwide

Local Radars

Climate

Local

National

Top News of the Day

- The 2009-10 Winter Season Was One of the Coldest & Wettest on Record
- Local Spring Flood Potential Outlook
- Changes to NWS Hydrologic Services Web Pages
- WFO Tallahassee Zone Changes

Watches & Warnings

Observations

Forecast Graphics

Rivers & Lakes

Climate

Graphicast

Click on the map below for the latest forecast.



[Read watches, warnings & advisories](#)



[Flood Warning](#)

[Hazardous Weather Outlook](#)



Last map update: Tue, Mar. 9, 2010 at 11:35:00 am EST

Latest Conditions in Tallahassee, FL

Choose Your Front Page City

Mar 9

10:53 am



Mostly Cloudy

60°F

(16°C)

Select A City:



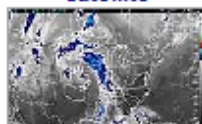
Graphical Forecasts



Radar



Satellite



Weather Map



Your
Official
Weather
Source



Your **National Weather Service** forecast



Tallahassee FL

Enter Your "City, ST" or zip code

Go

BOOKMARK

NWS Tallahassee, FL

Point Forecast: Tallahassee FL










30.47°N 84.25°W (Elev. 98 ft)

Mobile Weather Information | [En Español](#)

Last Update: 10:08 am EST Mar 9, 2010

Forecast Valid: 12pm EST Mar 9, 2010-6pm EDT Mar 15, 2010

Forecast at a Glance

This Afternoon	Tonight	Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday
								
30%	40%	60%	80%	70%	50%	50%	20%	
Chance Showers	Chance Rain	Tstms Likely	Showers	Tstms Likely	Chance Rain	Chance Rain	Slight Chc Showers	Partly Sunny
Hi 67 °F	Lo 49 °F	Hi 72 °F	Lo 57 °F	Hi 75 °F	Lo 58 °F	Hi 76 °F	Lo 49 °F	Hi 68 °F

Detailed 7-day Forecast

This Afternoon: A 30 percent chance of showers. Mostly cloudy, with a high near 67. South southeast wind around 10 mph.

Tonight: A 40 percent chance of rain after 1am. Cloudy, with a low around 49. South southeast wind around 5 mph.

Wednesday: Rain likely, with thunderstorms also possible after 1pm. Cloudy, with a high near 72. South southeast wind between 5 and 15 mph. Chance of precipitation is 60%. New rainfall amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.

Wednesday Night: Showers and possibly a thunderstorm. Low around 57. South southeast wind between 10 and 15 mph. Chance of precipitation is 80%.

Thursday: Showers likely and possibly a thunderstorm before 1pm, then a chance of showers and thunderstorms

Current Conditions

[Move Down]

view [Yesterday's Weather](#)

Tallahassee Regional Airport

Lat: 30.4 Lon: -84.35 Elev: 69

Last Update on Mar 9, 10:53 am EST

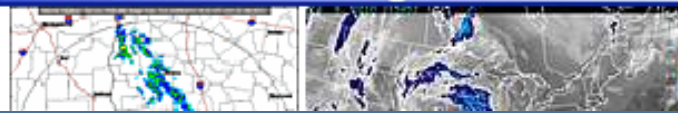
Mostly Cloudy

60 °F
(16 °C)

Humidity:	56 %
Wind Speed:	E 5 MPH
Barometer:	30.09" (1018.6 mb)
Dewpoint:	44 °F (7 °C)
Visibility:	10.00 mi.

More Local Wx: 3 Day History:

Radar and Satellite Images



County
Specific
Information:

* Hazardous
Weather
Outlook

* Watches

* Warnings

* Severe
Weather
Statements

* Short Term
Forecasts

NOAA ALL Hazards Weather Radio

<http://www.srh.noaa.gov/tae/nwr.php>

Broadcasts are found in the public service band at these seven broadcast frequencies (MHz):

162.400	162.425	162.450	162.475	162.500	162.525	162.550
MHz	MHz	MHz	MHz	MHz	MHz	MHz



Important Definitions

- **Watch** – Atmospheric conditions are favorable (or could become favorable) for the development of thunderstorms which could produce severe weather – remain alert.
- **Warning** – Severe weather has occurred or is likely to occur – take protective action.

Tornado Warning Criteria

A tornado is occurring, a verified funnel cloud is reported and the NWS believes it could develop on the ground, or radar indicates a thunderstorm capable of producing a tornado.



Severe Thunderstorm Criteria

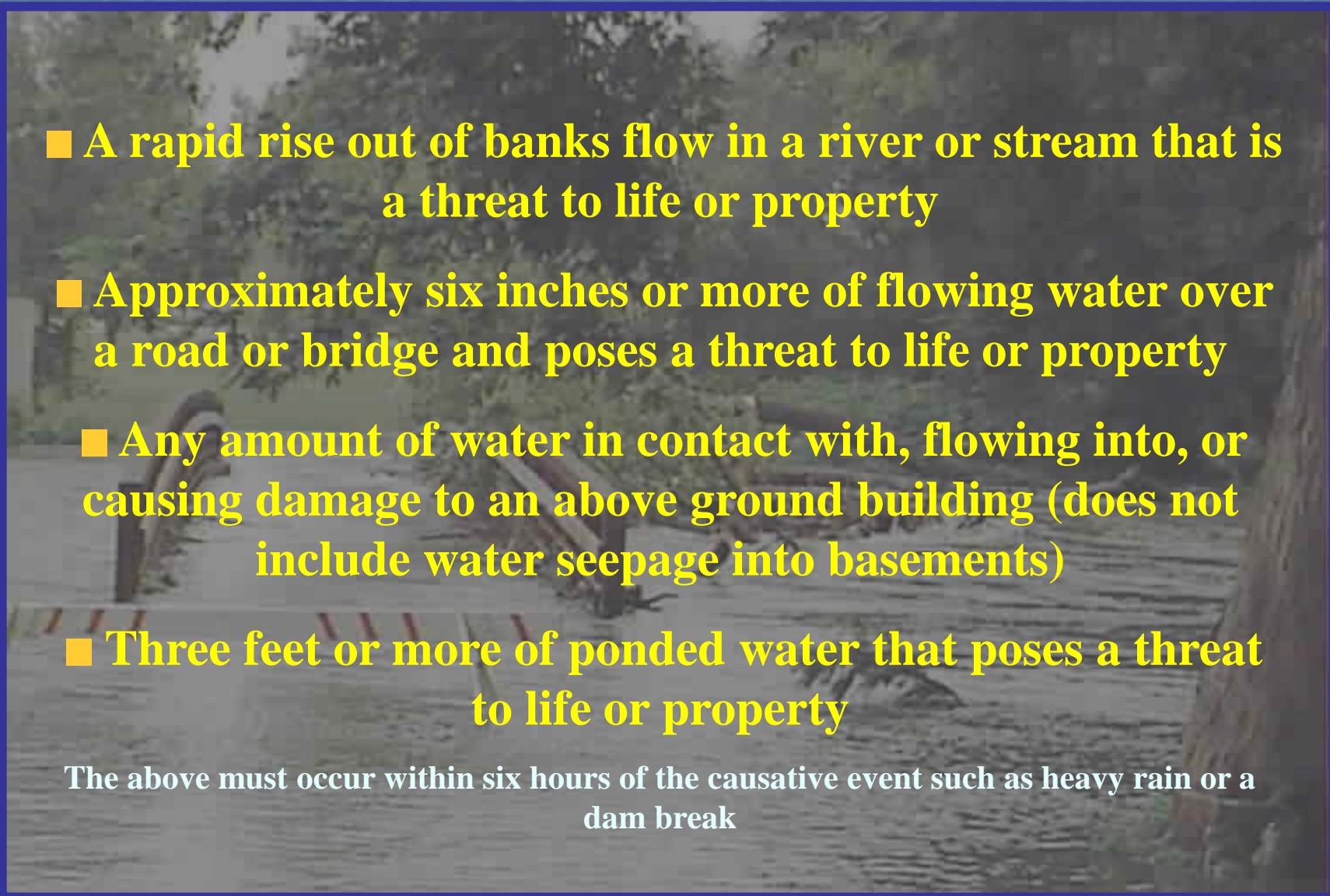
wind 58 mph or greater



1 inch or larger hail



Flash Flood Warning Criteria

- 
- A photograph showing a flooded road. A car is partially submerged in the water, which appears to be flowing rapidly. The background shows trees and a bridge structure.
- **A rapid rise out of banks flow in a river or stream that is a threat to life or property**
 - **Approximately six inches or more of flowing water over a road or bridge and poses a threat to life or property**
 - **Any amount of water in contact with, flowing into, or causing damage to an above ground building (does not include water seepage into basements)**
 - **Three feet or more of ponded water that poses a threat to life or property**

The above must occur within six hours of the causative event such as heavy rain or a dam break

Estimating Wind Speed

THE "SET" EFFECT.....

Storm spotters must also keep in mind that during a severe weather event, Stress, Excitement, and Tension levels are running high. This is called the "SET" effect, and it can alter your logic and reasoning abilities. Because of its presence, it is often very easy to over-estimate wind speeds.

A wind gust of 40 MPH during a fair weather day will not cause any great concern, but this same wind speed when experienced during a thunderstorm may seem like 60 MPH gust because of the SET effect.

When in doubt about your estimate, re-think it and try to remain calm and objective as possible. Use the table in the previous slide as a guide. Your goal is to pass real time observations with accuracy, speed, and professionalism.

Estimating Wind Speed

25-31 mph - large branches in motion

32-38 mph – whole trees in motion

39-54 mph – twigs break off, wind impedes walking

55-72 mph – damage to chimneys and TV antennas, large branches broken and some trees uprooted

73-112 mph – removes shingles, windows broken, trailer houses overturned, trees uprooted

113+ mph – roofs torn off, weak buildings and trailer houses destroyed, large trees uprooted



Copyright Mike Umscheid

What To Report

Tornado, Funnel Cloud, or Wall Cloud



Copyright Eric O'Connor

What To Report

Strong or Damaging Wind

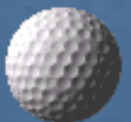


What To Report

Hail



What To Report



What To Report

Any Storm Damage



What To Report

Urban Flooding



What To Report

Rural Flooding



Copyright Joel LaRue

What To Report

Heavy Rain or High Water



What To Report

Past Water/Flood Damage



Courtesy of Debbi Segina

The Effective Spotter Report



The Effective Spotter Report

- Call your NWS office via phone 800-598-4562 or 850-942-8833
- State source of report (your identity, i.e. trained spotter)
- Give your exact location (and location relative to the event)
- State the start & end time of the event (be sure to differentiate between event time & report time)
- Give an event description (be as specific and detailed as possible)
- If event is still occurring, provide frequent updates
- Give as reliable information as possible. Do not embellish

Your storm report
can also be sent to
the NWS via the
Internet.



Severe Weather Report Form		
Click Here for the Winter Weather Report Form		
Date & Time		
Date	Time	<input type="radio"/> Estimated
Oct / 09 / 2009	19 : 17 EST	<input type="radio"/> Exact
Location		
Select County, State	City/Town	
Leon, FL (073)	Tallahassee	
Weather		
<input type="checkbox"/> Tornado		
<input type="checkbox"/> Funnel Cloud		
<input type="checkbox"/> Wall Cloud		
<input type="checkbox"/> Hail		
<input type="checkbox"/> High Wind		
<input type="checkbox"/> Flood		
<input type="checkbox"/> Flash Flood		
<input type="checkbox"/> Other		
* Note if there is rotation in narrative.		
Size:		
Wind Speed: MPH		
<input type="radio"/> Measured		
<input type="radio"/> Estimated		
Damage, Injuries, Narrative		
Any Damage? <input type="radio"/> Yes <input type="radio"/> No		
Was Anyone Hurt? <input type="radio"/> Yes <input type="radio"/> No		
Please describe what you observed, movement and any associated damage, including injuries, 2500 characters maximum:		
Submit Report Reset		

• Enter your storm report information and submit it directly to NWS forecasters!

What Makes a Good Report?

Caller #1: "I was just calling to report that a severe thunderstorm just moved through my neighborhood. It was windy and there was lots of lightning and heavy rain."

Caller #2: "We just had a severe thunderstorm move through our neighborhood in Thomasville. We have several large trees down in the road and I also see quarter size hail on the ground."

One of these reports is better than the other. Why?

What Makes a Good Report?

Caller #1: "I was looking out my window toward the south and I saw a tornado. The clouds were really dark and hanging near the ground."

Caller #2: "We definitely had a funnel cloud move overhead. You could see the cloud base rotating with a funnel extending down. It wasn't on the ground yet. I lost sight of it a few minutes ago."

One of these reports is better than the other. Why?

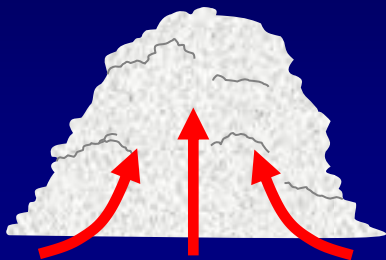
What Makes a Good Report?

Caller #1: "I live in Quitman and there was quarter size hail falling downtown. A large oak tree also fell. There was very heavy rain for about 20 minutes, but I haven't seen any flooding in town."

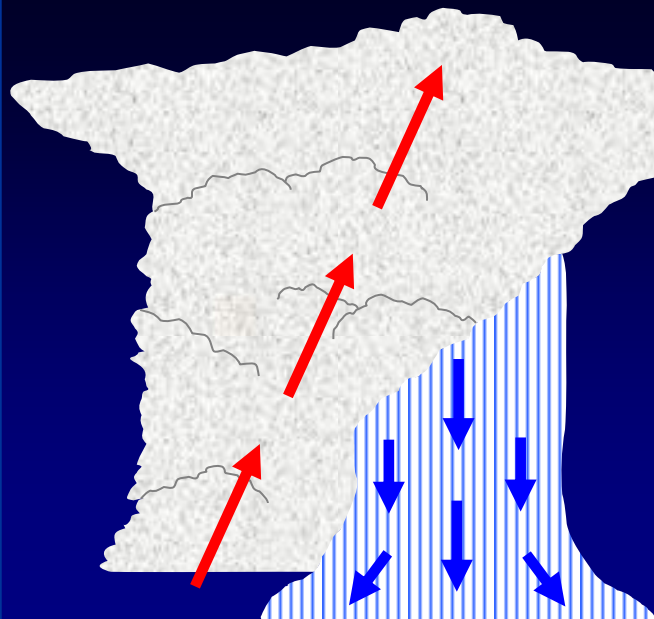
Caller #2: "I tell you what. If you don't have a warning out, you are crazy. That storm was terrible. The rain was just pounding on my window and it didn't stop lightning for like five minutes."

One of these reports is better than the other. Why?

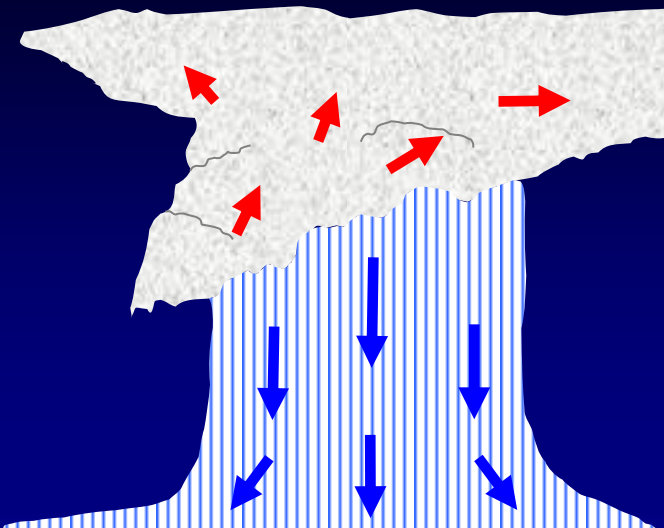
Thunderstorm Life Cycle



Cumulus Stage



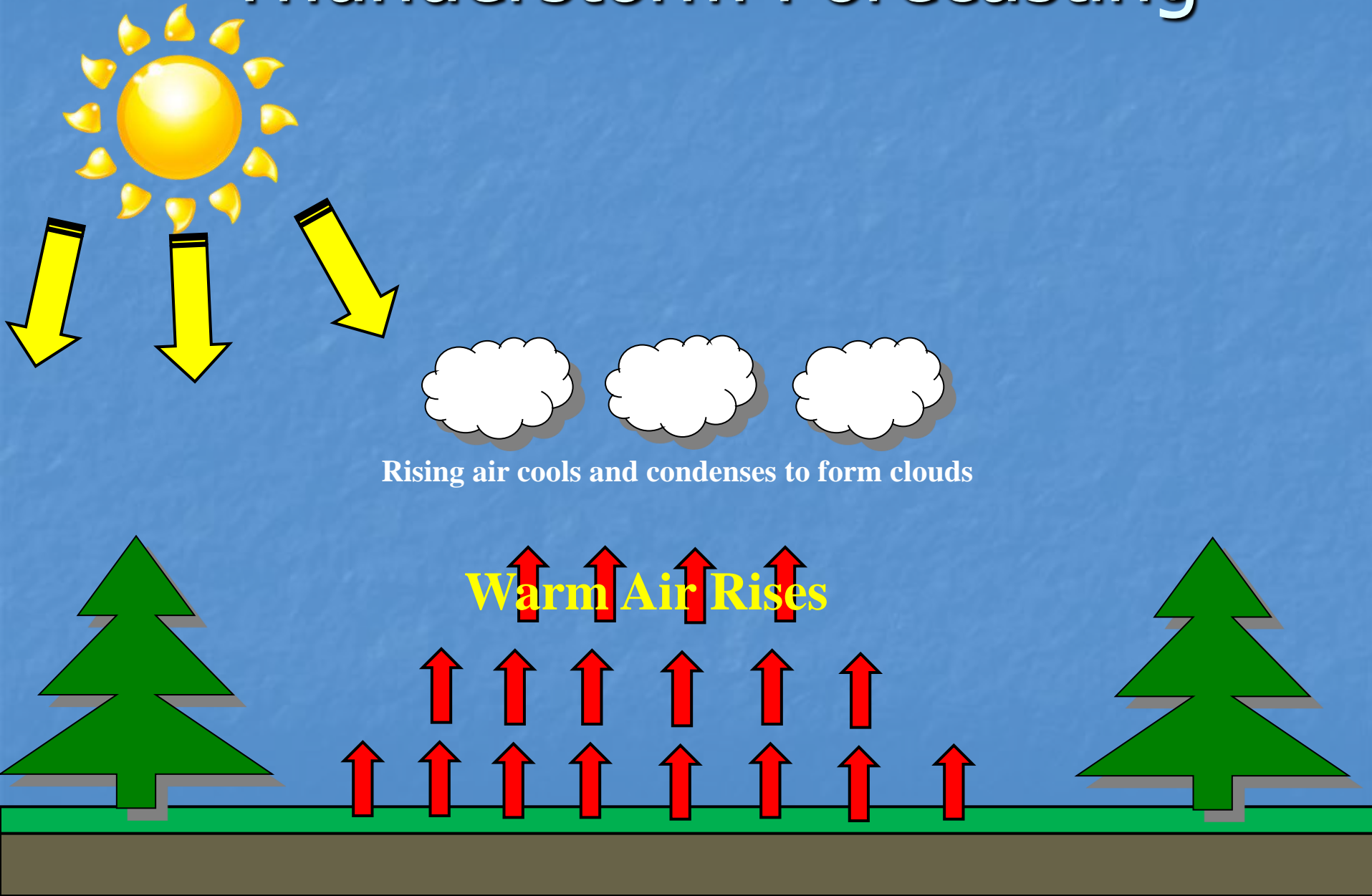
Mature Stage



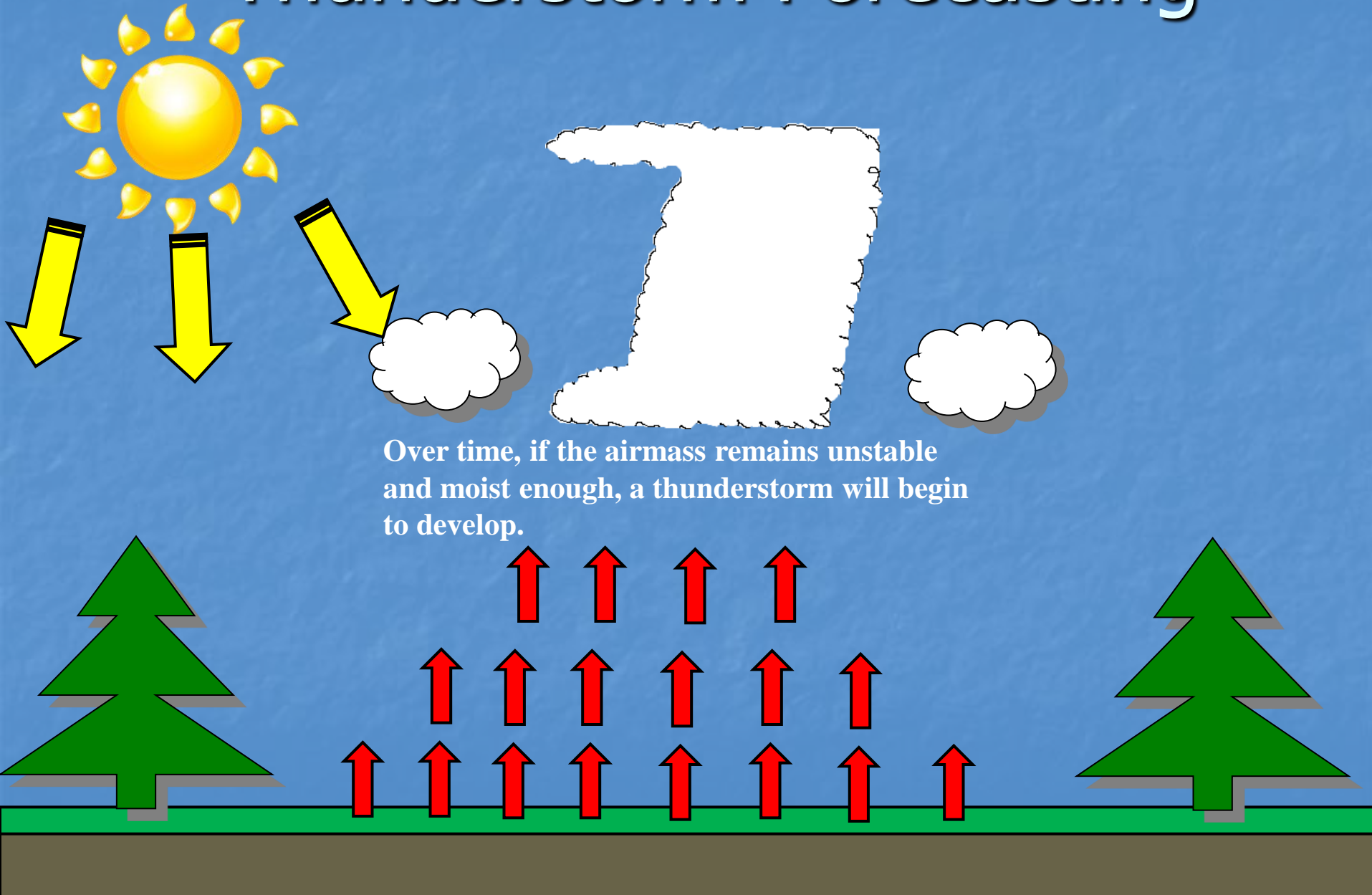
Dissipating Stage



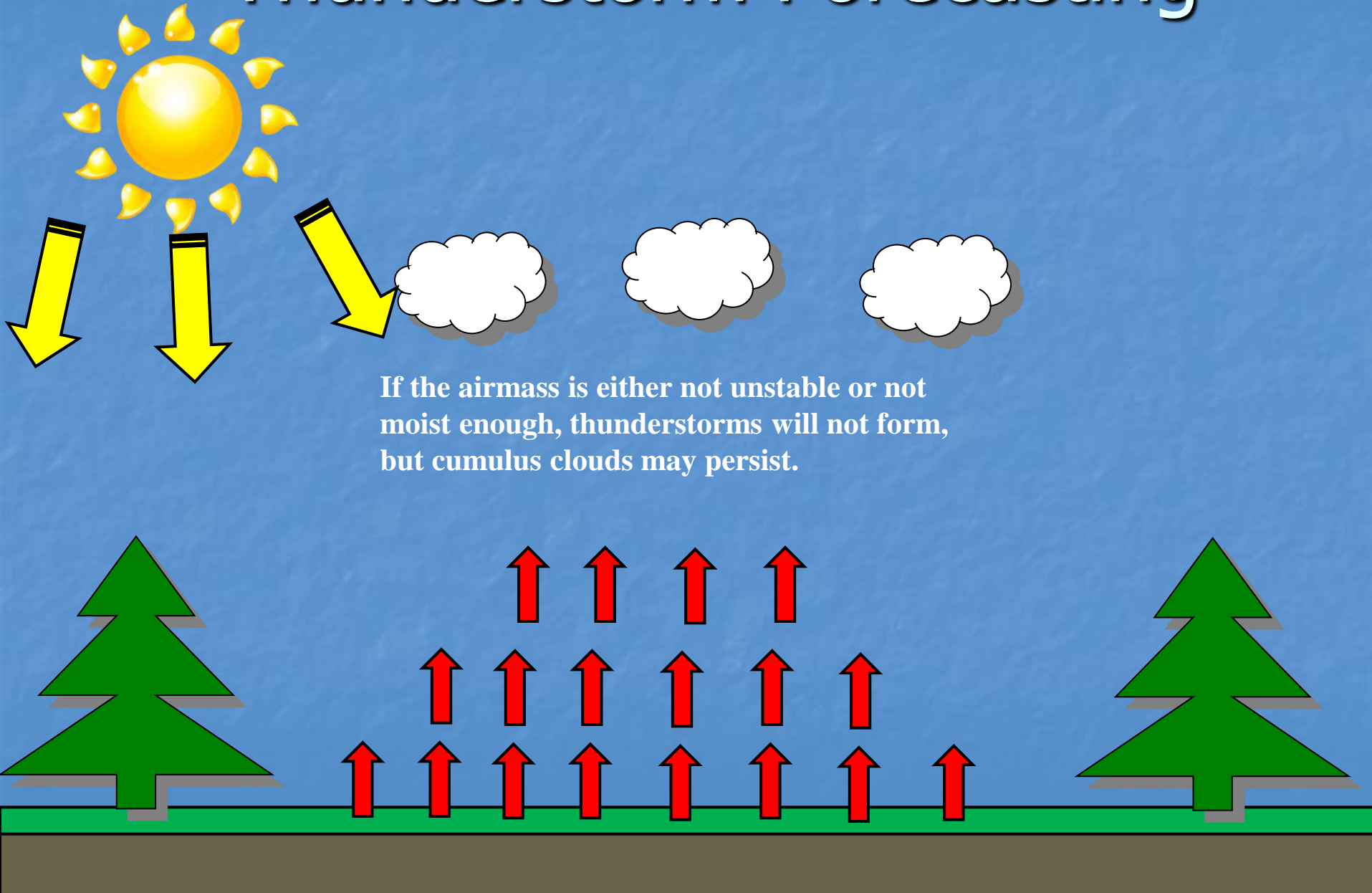
Thunderstorm Forecasting



Thunderstorm Forecasting



Thunderstorm Forecasting



Severe Weather Forecasting

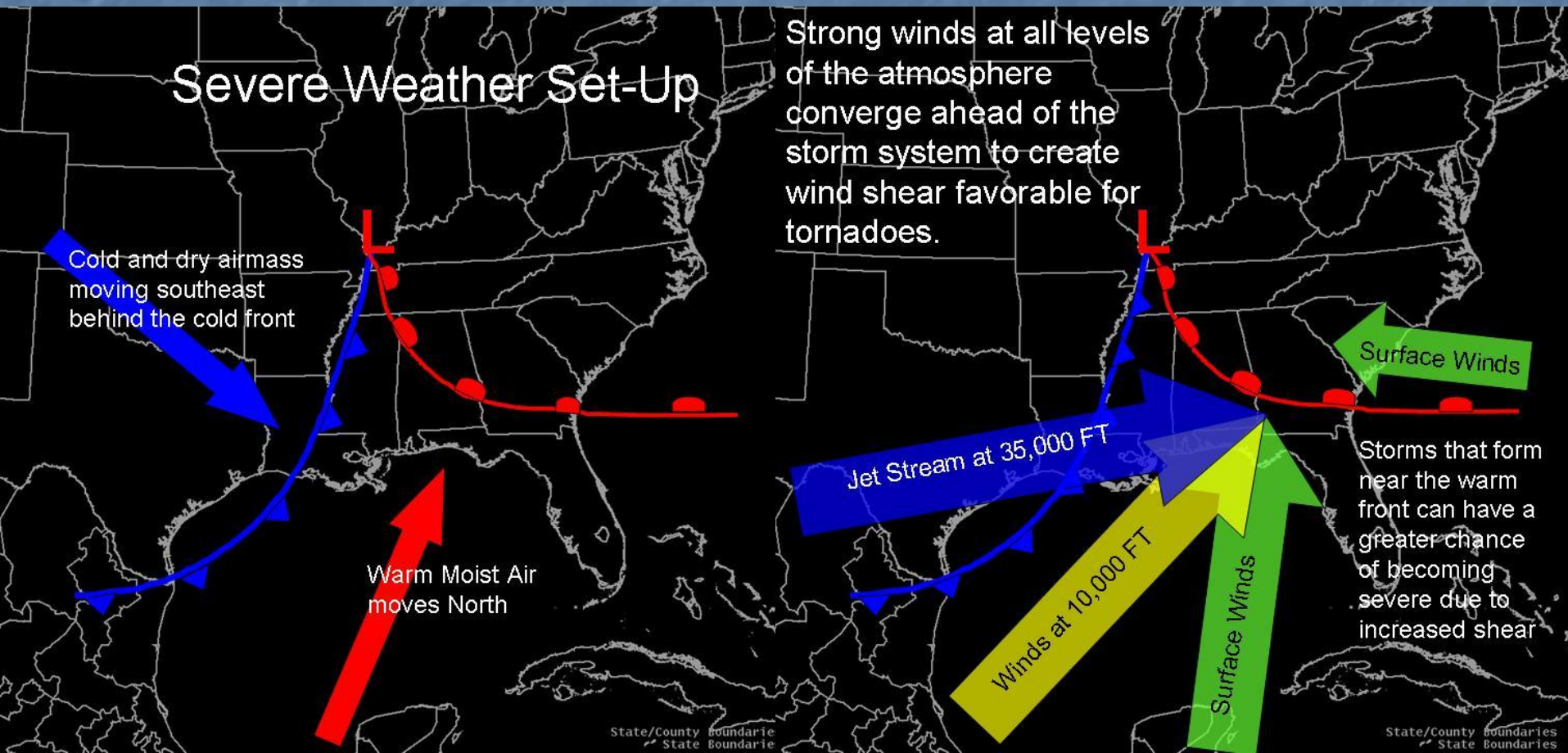
- When forecasting severe weather, we need four main ingredients to come together
 - Instability (lots of warm air at the surface)
 - Moisture (southerly winds off the Gulf)
 - Lifting mechanism (strong cold front)
 - Wind shear (winds increasing and changing direction)
- Only on rare occasions do all four of these ingredients mix together at the same time in our region.

The ingredients begin to take shape...

Lift, Instability and Moisture

Wind Shear

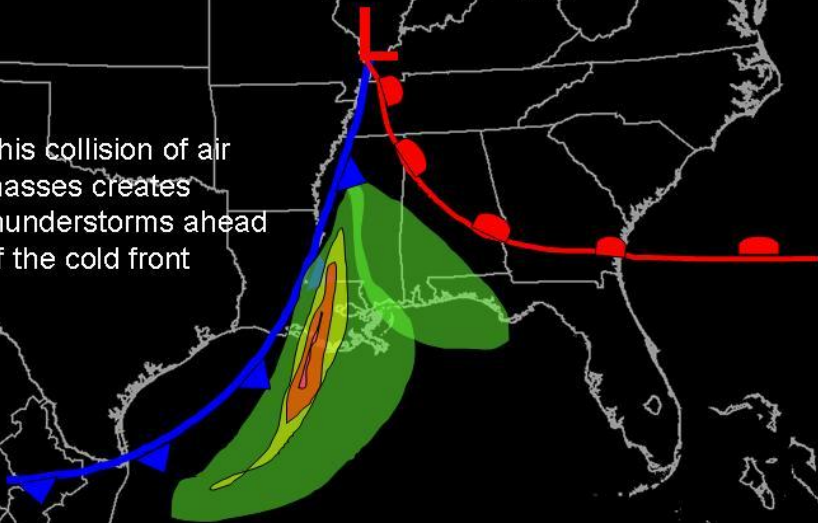
Severe Weather Set-Up



This is what it looks like when the ingredients have come together

Severe Weather Set-Up

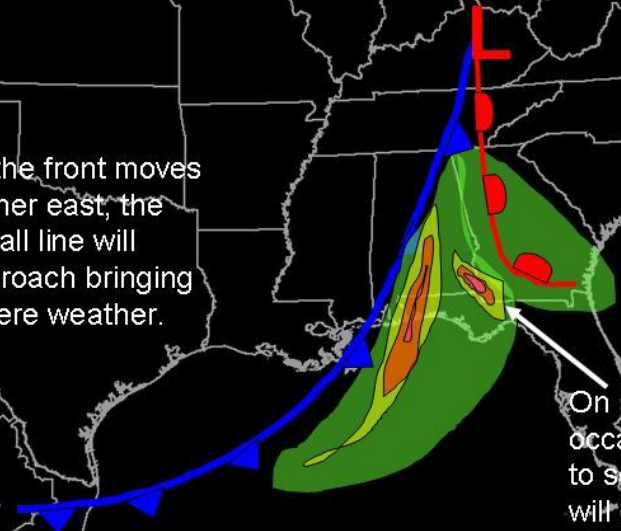
This collision of air masses creates thunderstorms ahead of the cold front



State/County boundaries
State boundaries

Severe Weather Set-Up

As the front moves further east, the squall line will approach bringing severe weather.



On some occasions, strong to severe storms will develop ahead of the squall line.

State/County boundaries
State boundaries

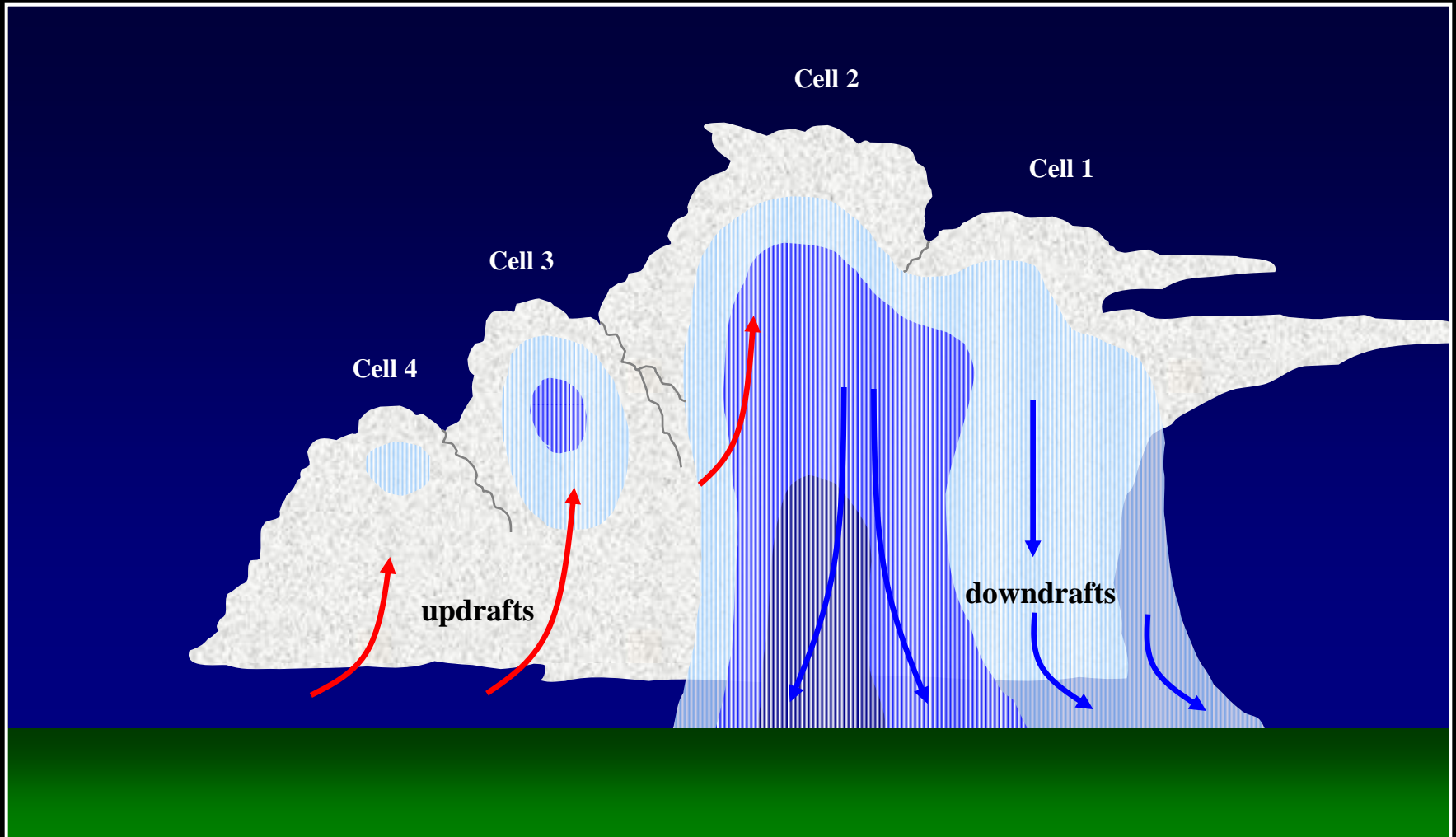
Common Thunderstorm Types

- **Multicell** - ordinary storms with low severe threat
- **Squall line** - line of storms with moderate wind threat
- **Classic Supercell** - rotating updraft with high severe threat
- **HP (high precipitation) Supercell** - rotating updraft often times obscured by heavy rain, high severe threat



Copyright Bob Henson

Multicell Thunderstorm



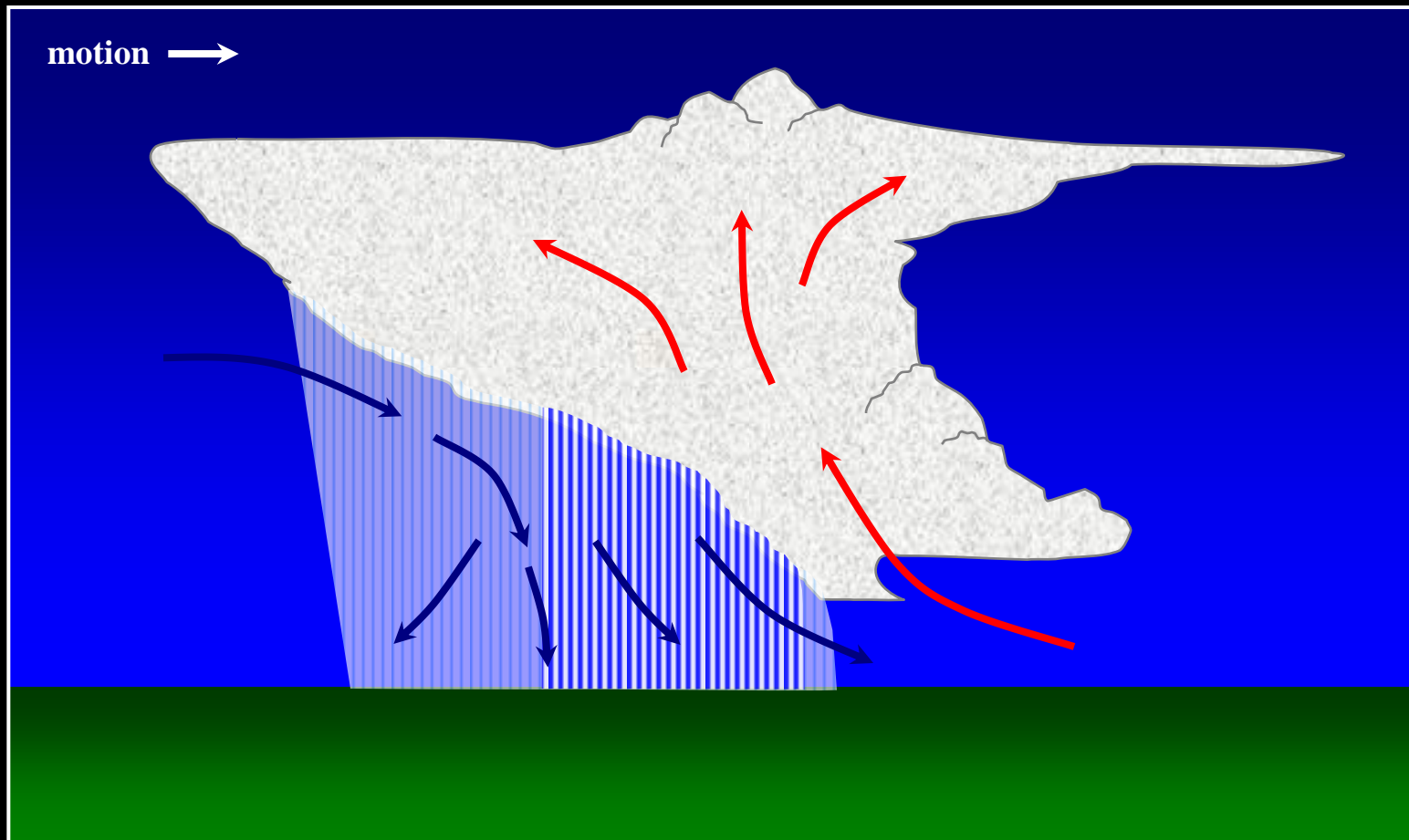
Side view

Multicell Thunderstorm



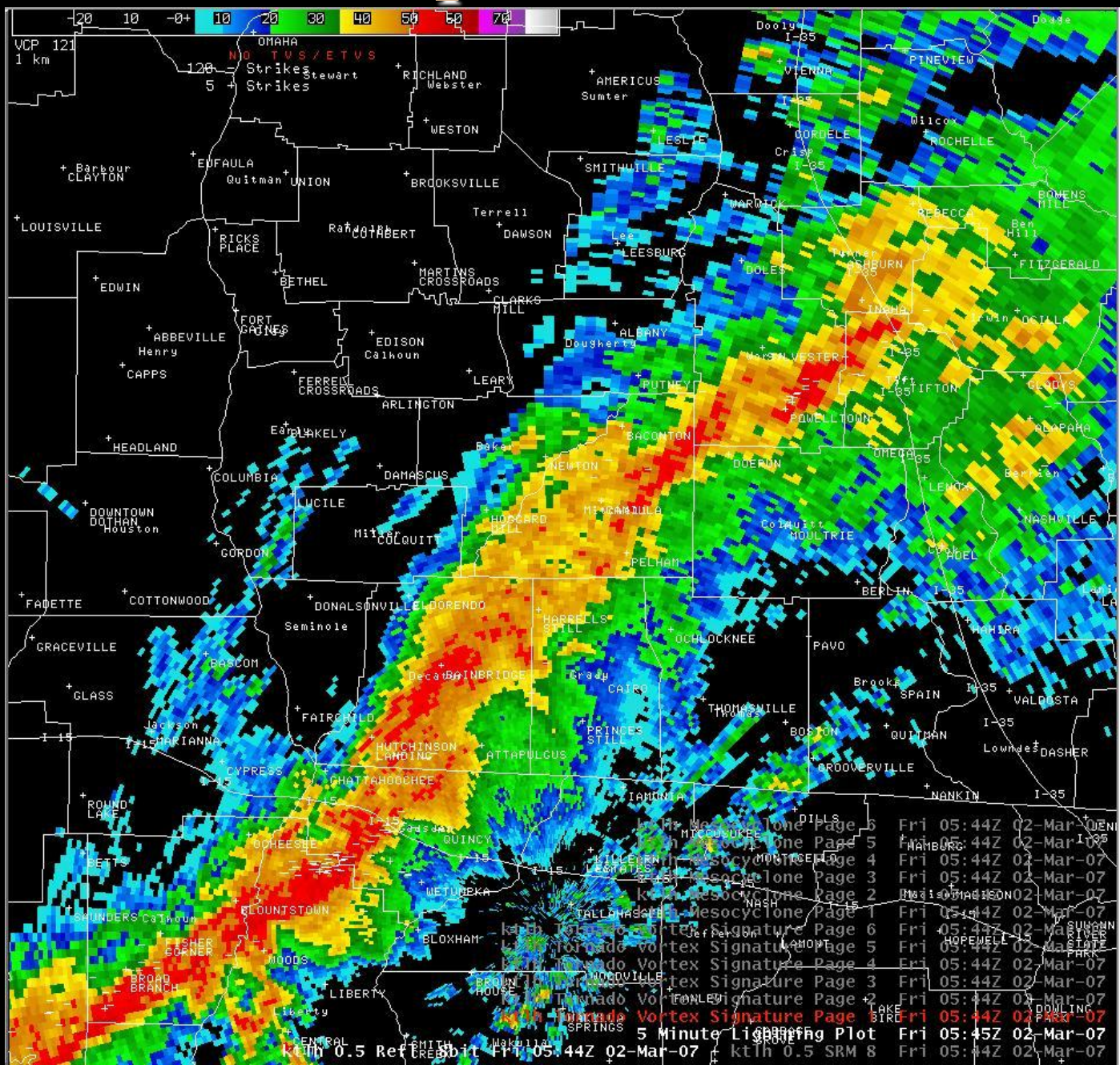
Copyright Alan Switzer

Squall Line

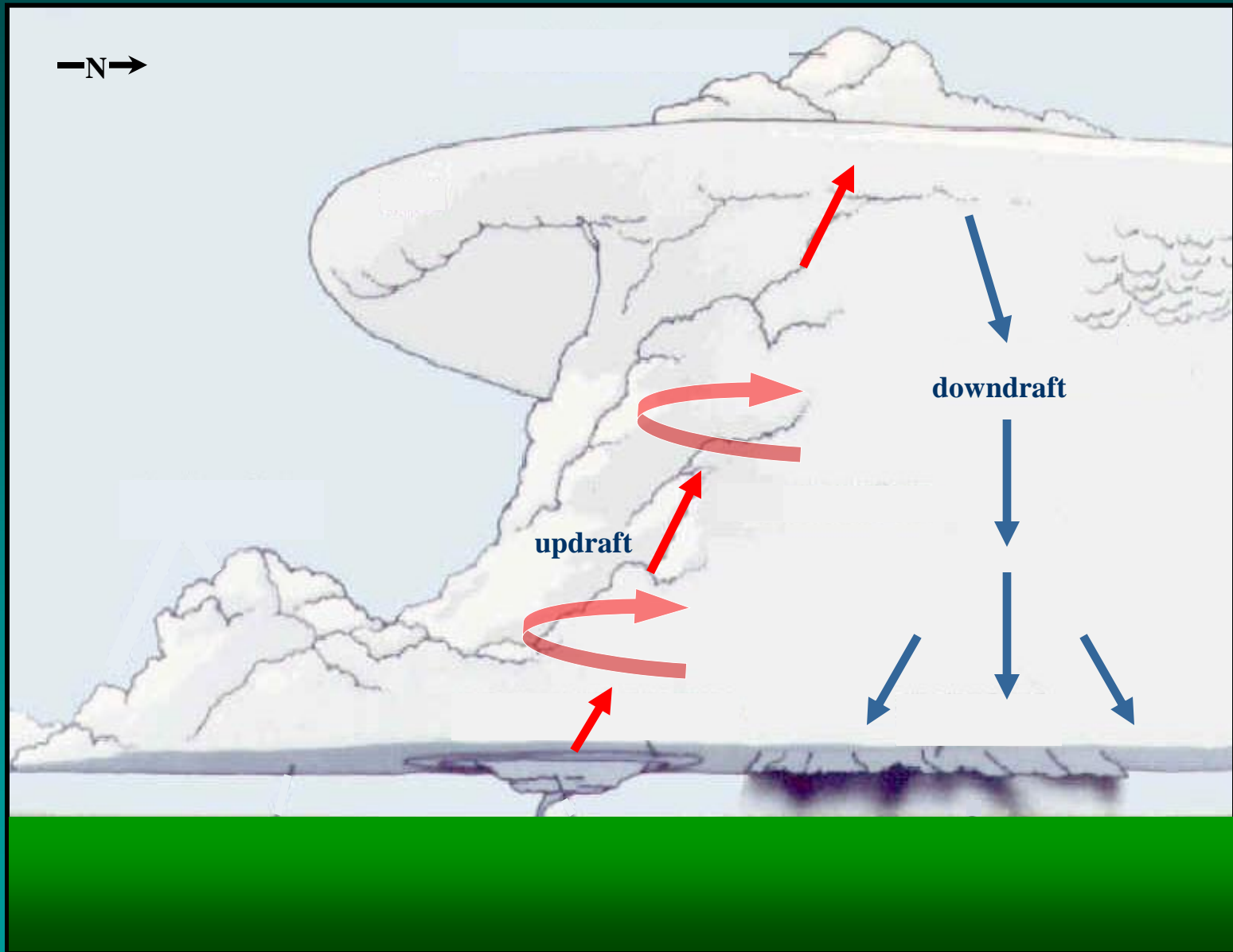


(Cross section)

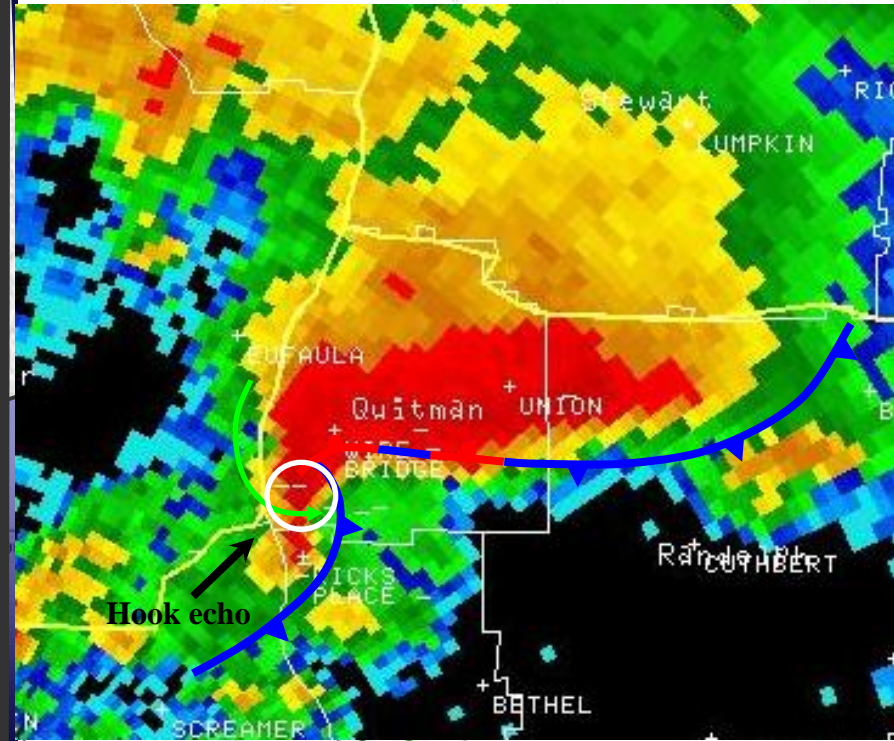
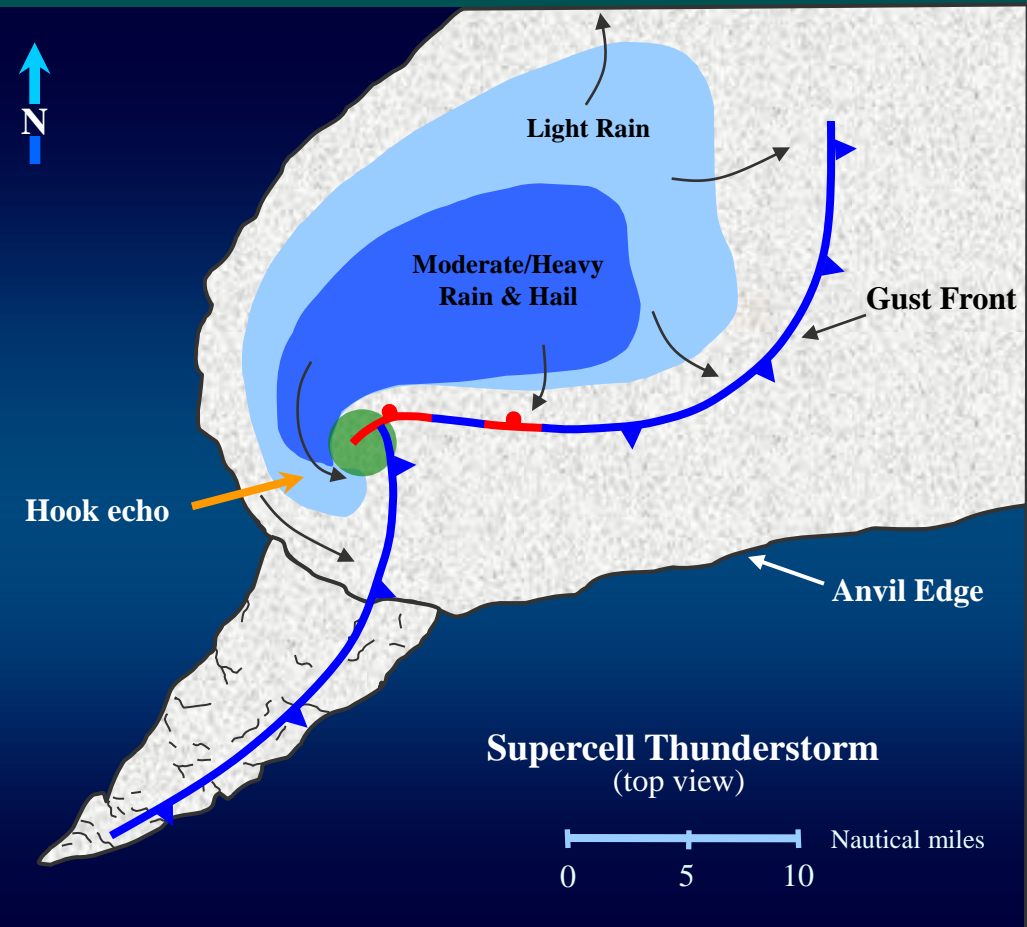
Squall Line



Classic Supercell Thunderstorm



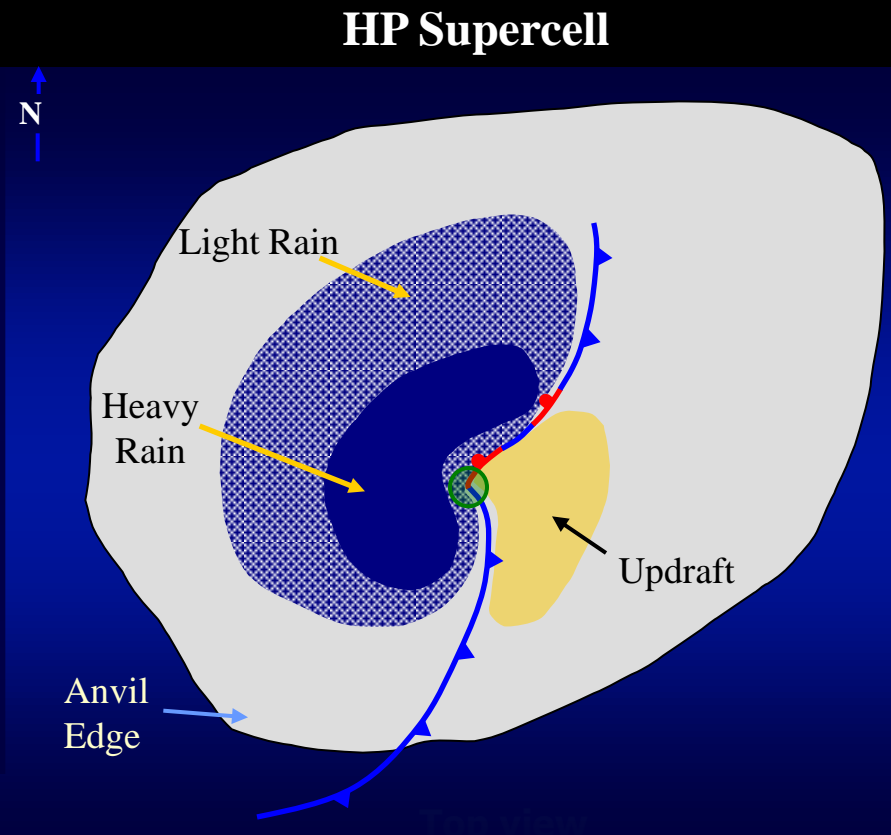
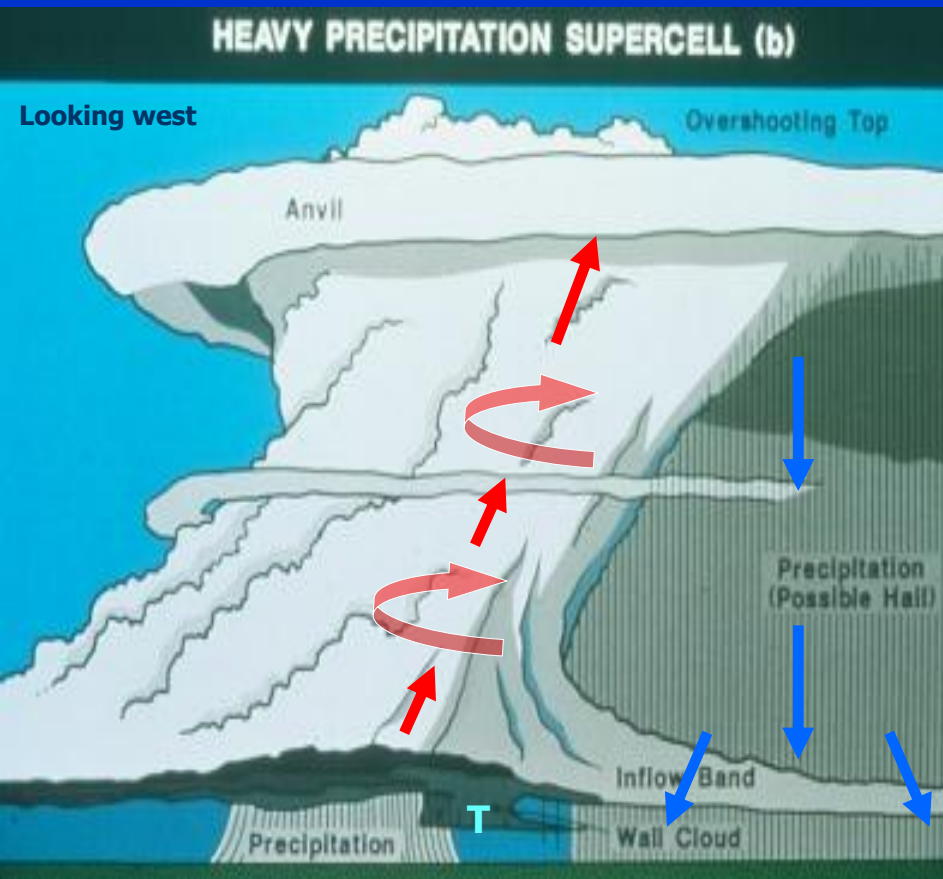
Classic Supercell Thunderstorm



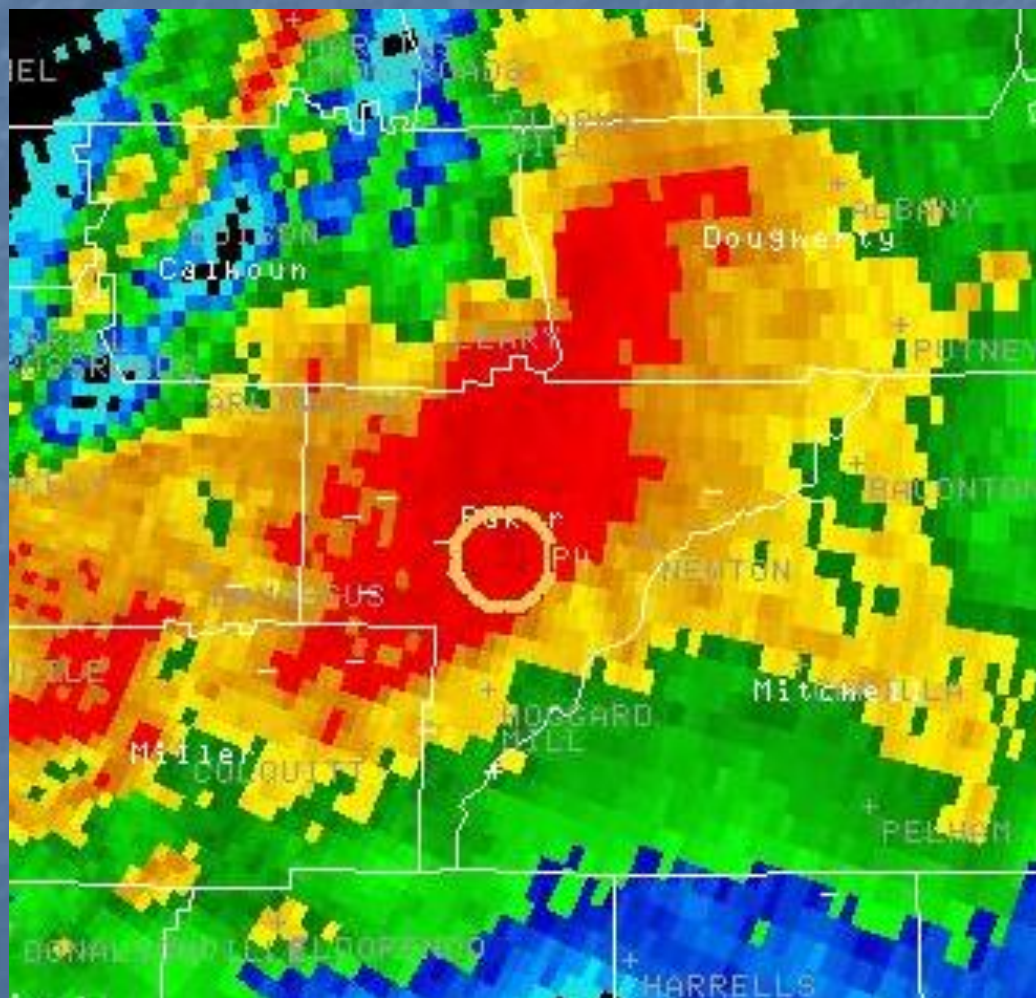


BWmott

HP Supercell

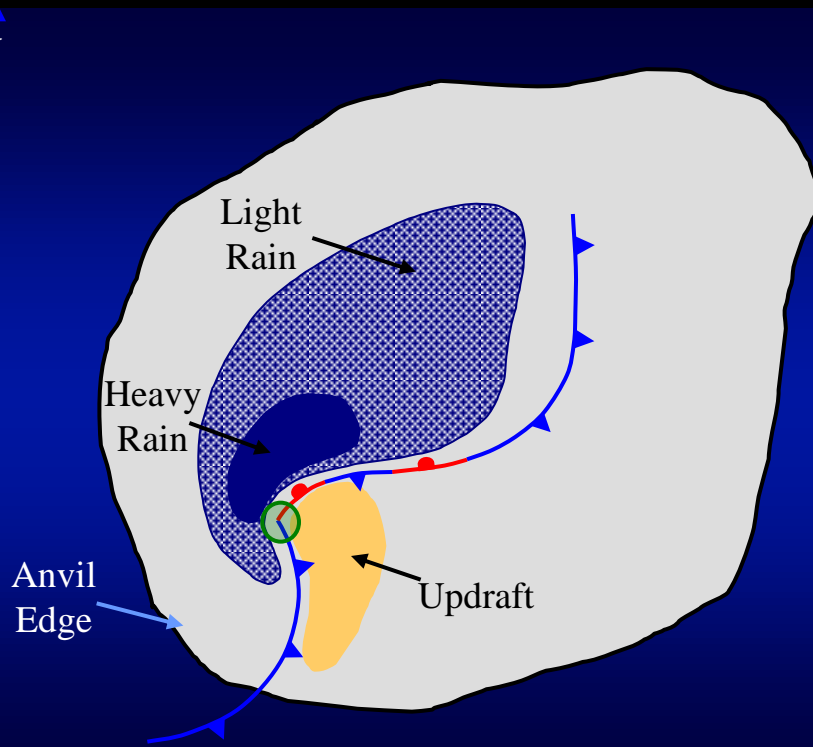


HP Supercell



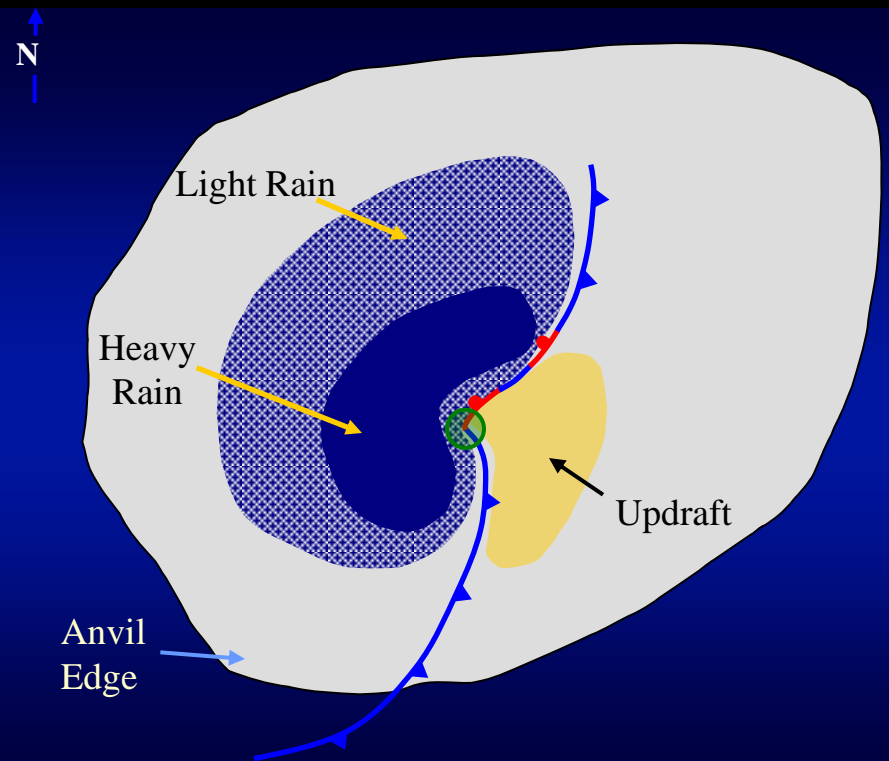
Classic vs. HP comparison

Classic Supercell



Top view

HP Supercell

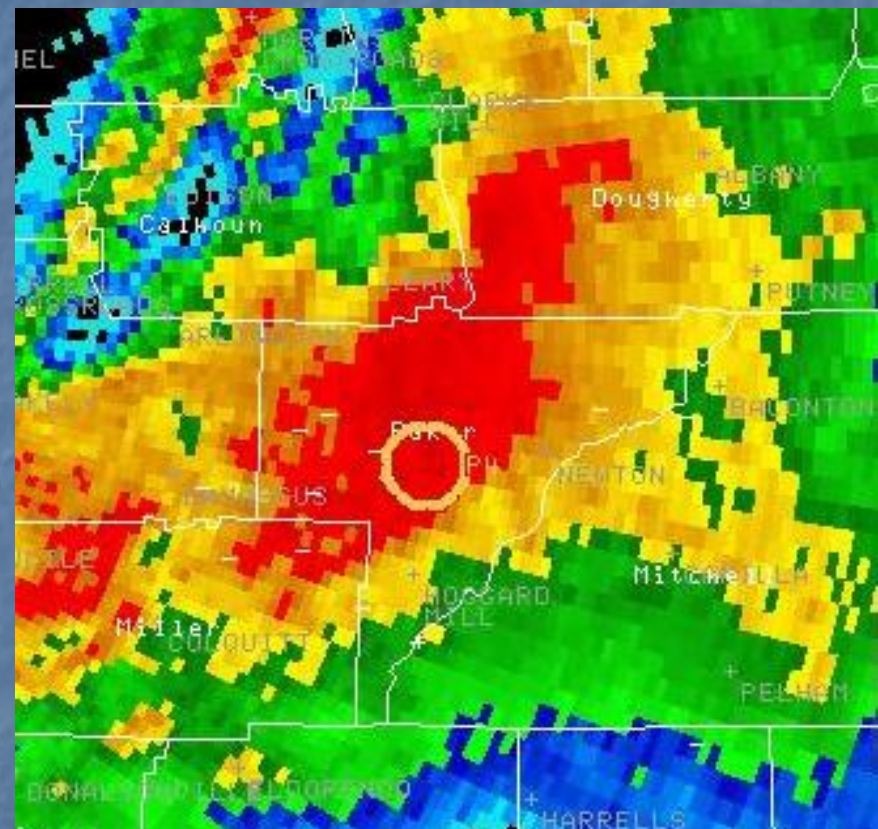


Top view

Two Supercell Thunderstorms from the March 1-2, 2007 Tornado Outbreak



Classical Supercell



High Precipitation
Supercell

HP Supercell



Copyright Matt Grzych

Updrafts

Downdrafts

Shelf Cloud

Wall Cloud

Funnel Cloud

Rainfree Base

Land spout

Gust Front

Tornado

Gustnado



Updraft Characteristics

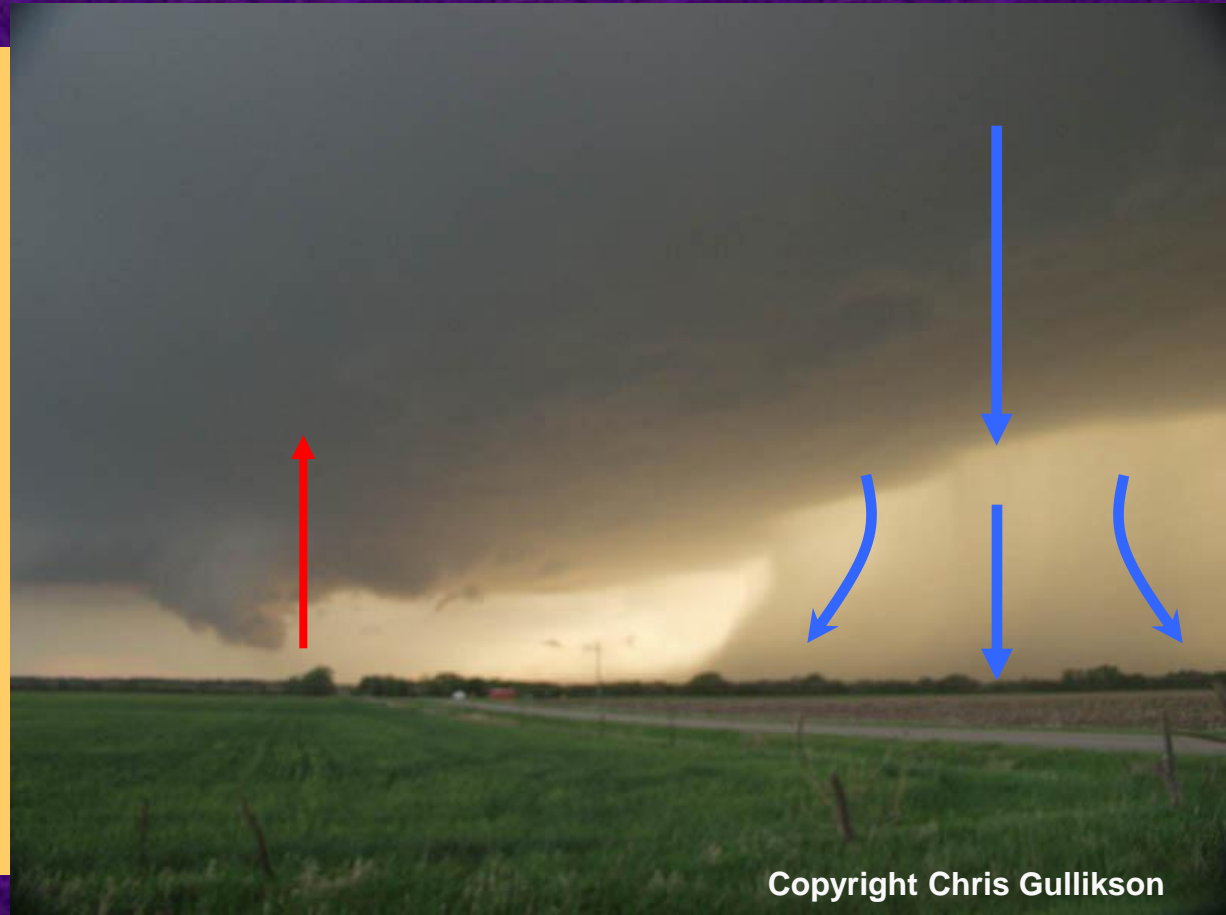


- “Back” side of storm
- Cumulus tower
- Rainfree base
- Upward cloud motion
- Supercell has rotating updraft

Copyright Dave Chapman

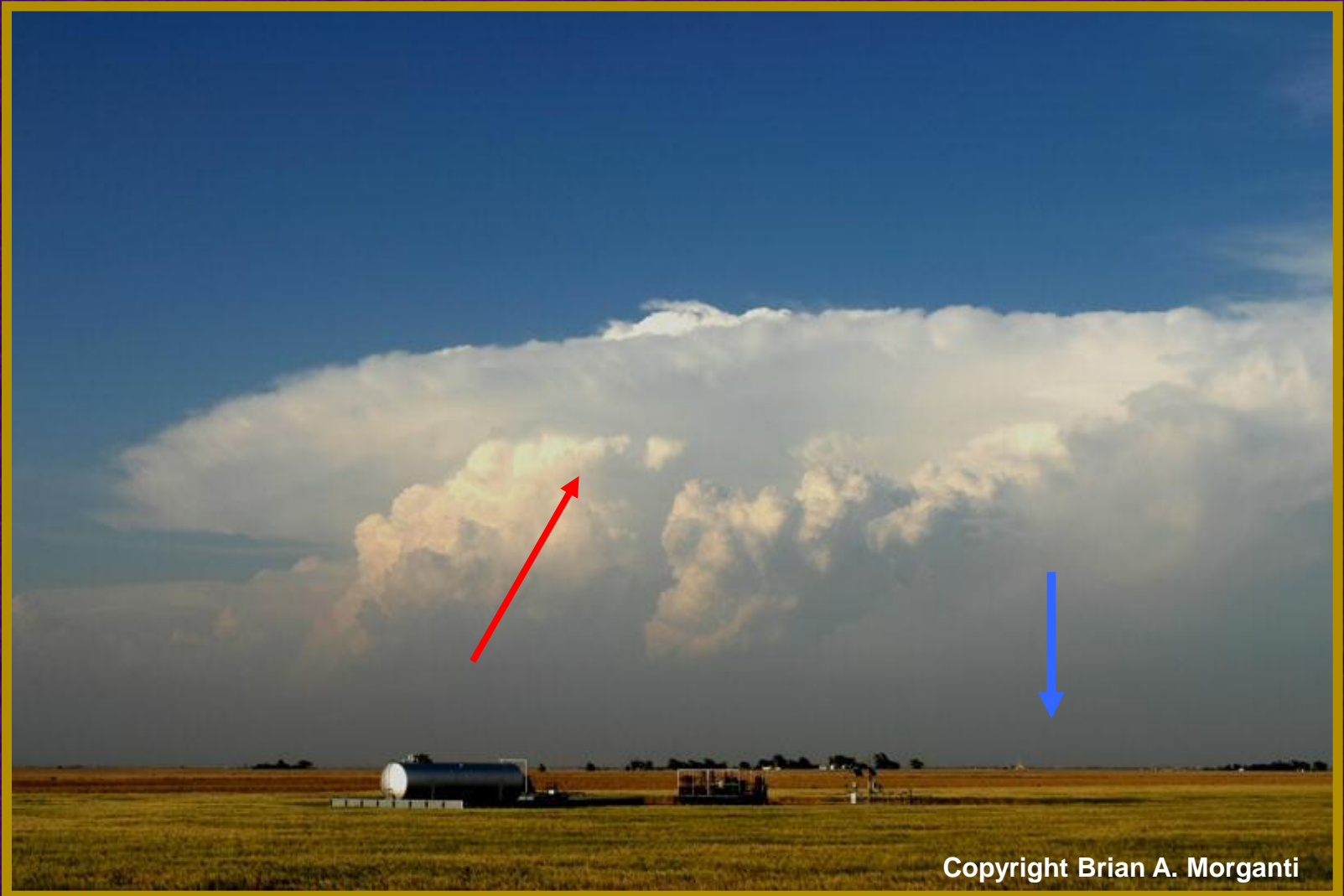
Downdraft Characteristics

- “Front” side of storm
- Dark area of storm
- Rainfall region
- Downward motion
- Downburst/hail threat



Copyright Chris Gullikson

Updraft/Downdraft



Copyright Brian A. Morganti



Copyright Ken Dewey



Courtesy Adrian Pingstone

Upper Level Storm Strength Clues



07/14/2004
Copyright Robert Heishman



Copyright R. Hay Cummins

Mid Level Storm Strength Clues



Copyright Mark Erk

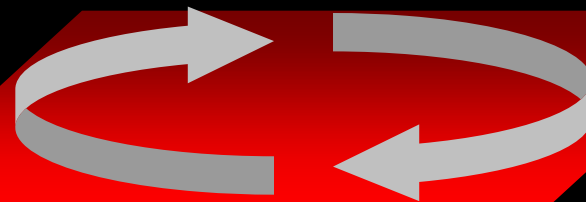


Copyright Nicole Kelly

Shear vs. Rotation

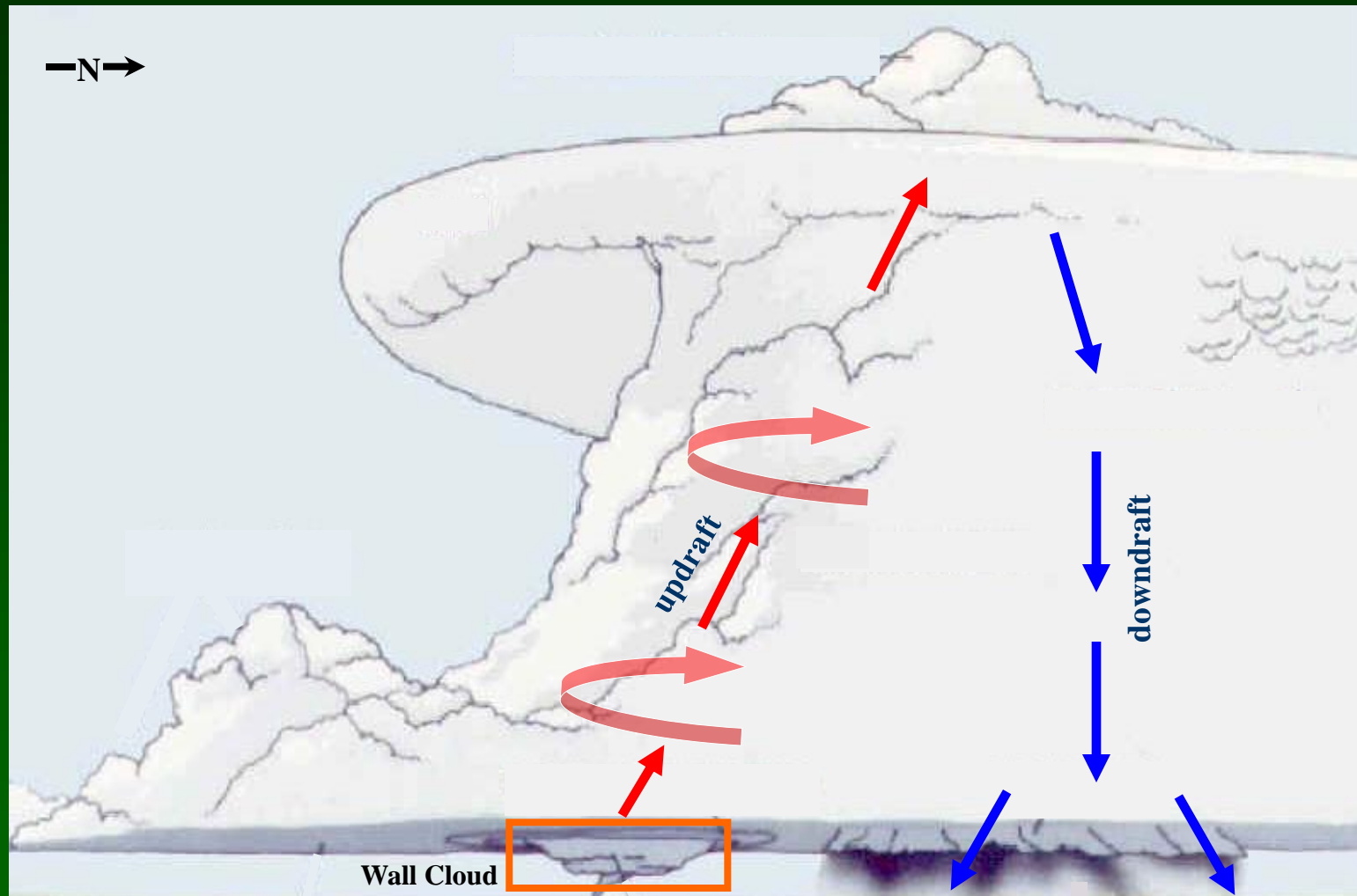


Shear



Rotation

Wall Clouds



Wall Cloud Characteristics

- > Surface based inflow under the updraft
- > Attached to cloud base
- > Look for persistence
- > May or may not rotate
- > Look for vertical cloud motion
- > Often slopes or points toward precipitation or downdraft



Copyright Andy Kula

Wall Cloud



Copyright Michael D. Peregrine

Wall Cloud



Copyright Chris Gullikson

Funnel Clouds

- > A rotating, funnel-shaped cloud extending downward from a thunderstorm base.
- > Usually located near updraft but can be found anywhere
- > Attached to cloud base
- > Exhibit rapid rotation and are most often laminar or smooth in appearance
- > Do not reach ground





© 2004 Jim Bishop & Reed Timmer/Stormgasm.com



Copyright Jeff Piotrowski, Storm Productions, Inc.

Tornado

A violently rotating column of air extending
from cloud base to the ground.



Copyright Eric O'Connor



Copyright Reed Timmer, Jim Bishop

Funnel Cloud

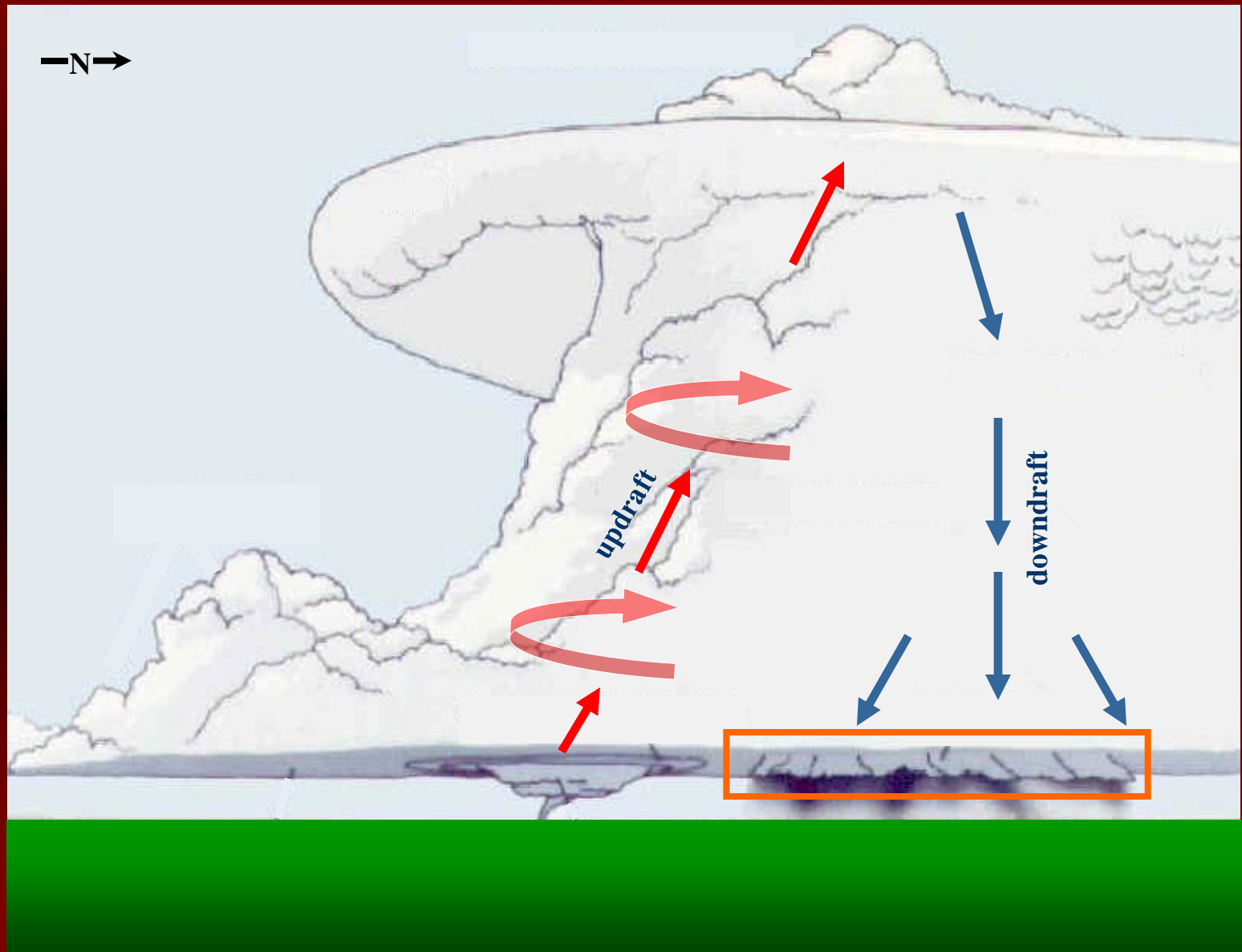


Copyright Jason Parkin KCCI

Funnel Cloud/Tornado



Shelf Clouds



Shelf Clouds

- Marks the leading edge of the gust front
- Usually produced by rain cooled air
- Usually in area of low level shear
- Slope down away from precipitation area
- Often associated with a squall line- can be associated with gustnadoes or damaging straight-line wind



Copyright Sarah Tessendorf

Shelf Clouds



Copyright Chris Gullikson

Mammatus



BREAK – End of Part One



Storm Feature Look Alike

Copyright Mike Hollingshead

Look Alike



Photo A

Copyright Chris Gullikson

Look Alike



Look Alike



Look Alike



Look Alike



Look Alike



Look Alike



Look Alike



Warm Season Storms – Case Study

- Predominantly weak shear, high CAPE events.

- Sea breeze interactions drive severe potential

- Too much moisture or active sea breeze fronts can inhibit severe potential.

- Mid level dry air can actually enhance downburst potential.

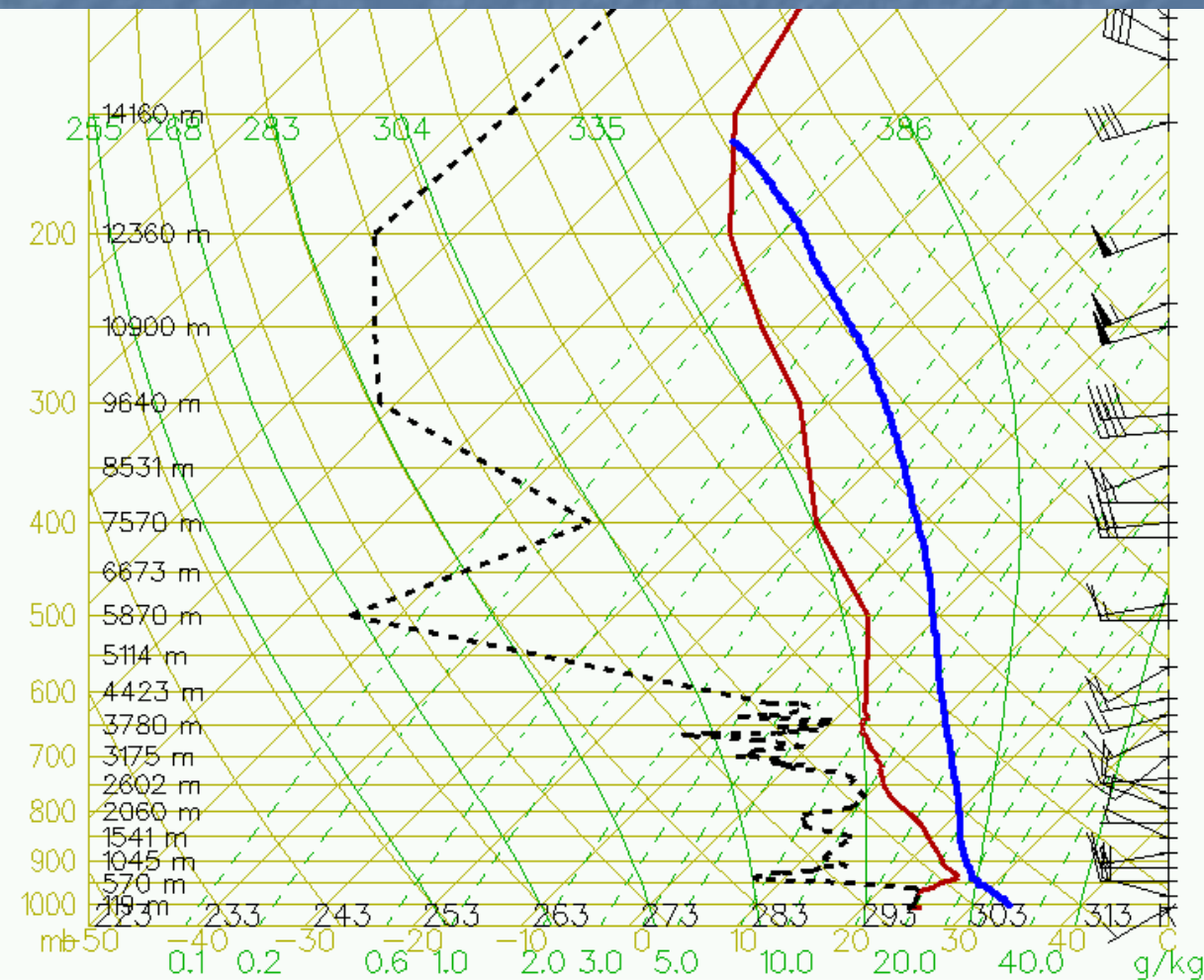
- Things to look for:

- 700-500 mb dewpoint depressions elevated

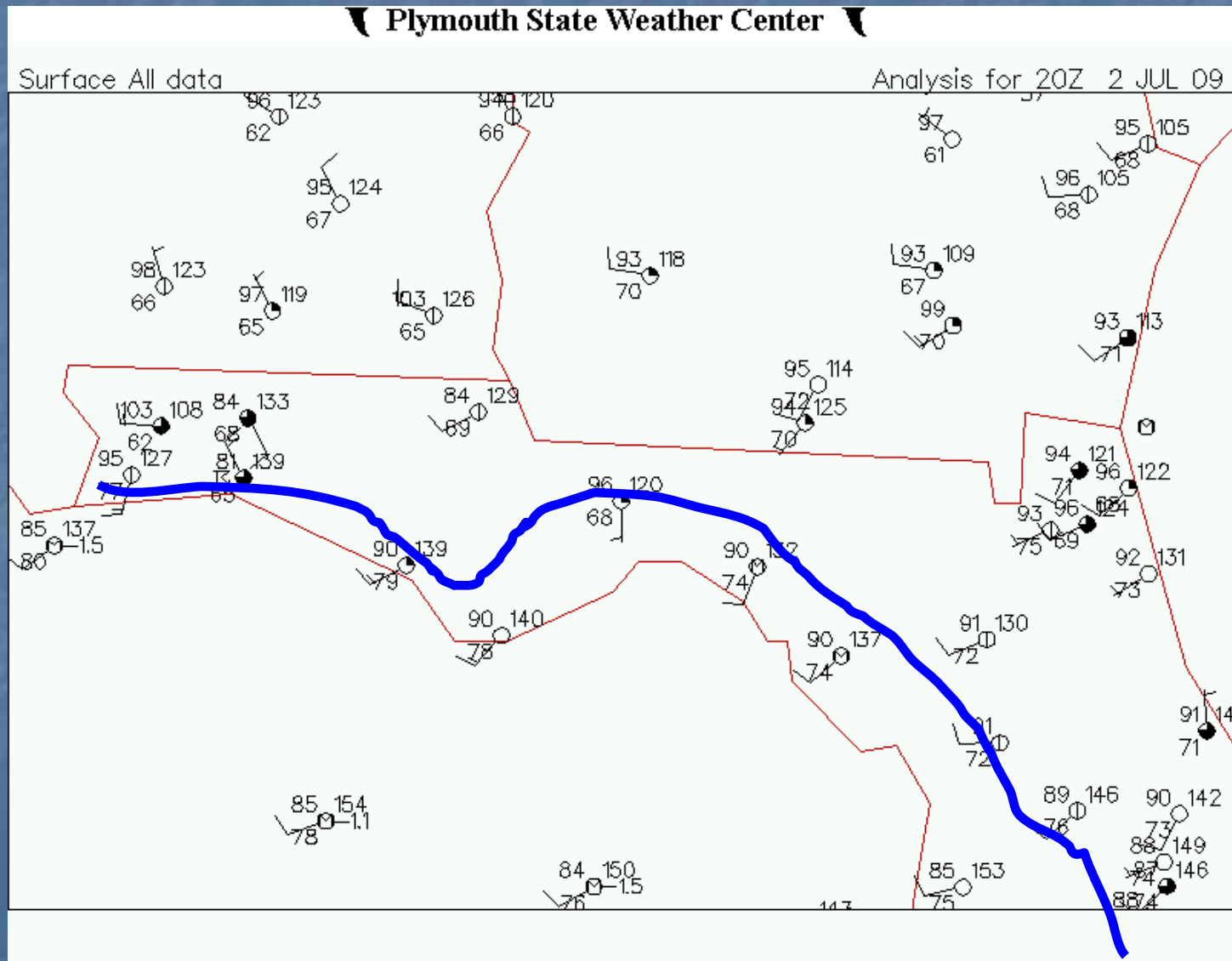
- Convergent flow relative to sea breeze boundaries (West, Northwest, Northeast, East)

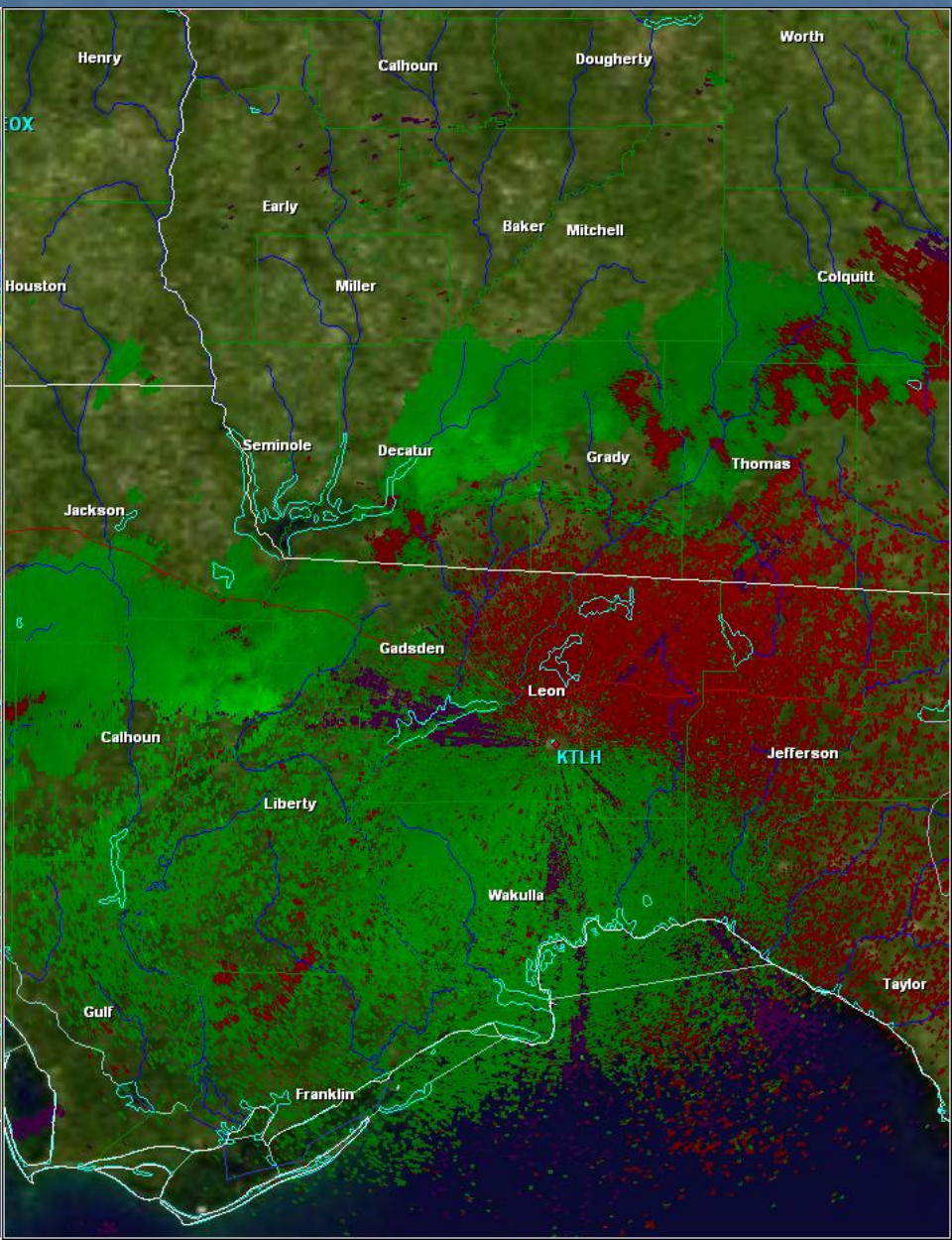
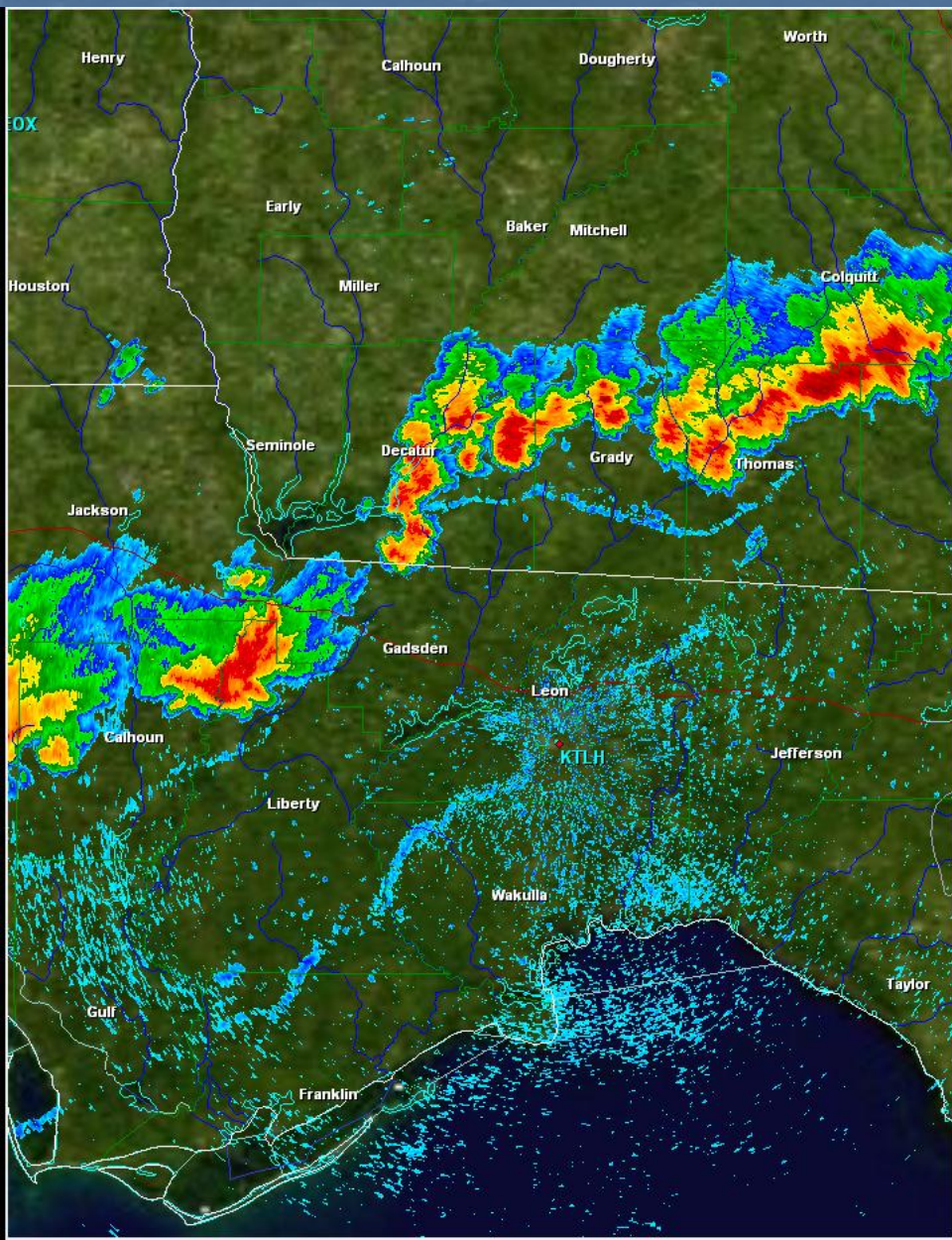
- Freezing level less than 15,000 ft.

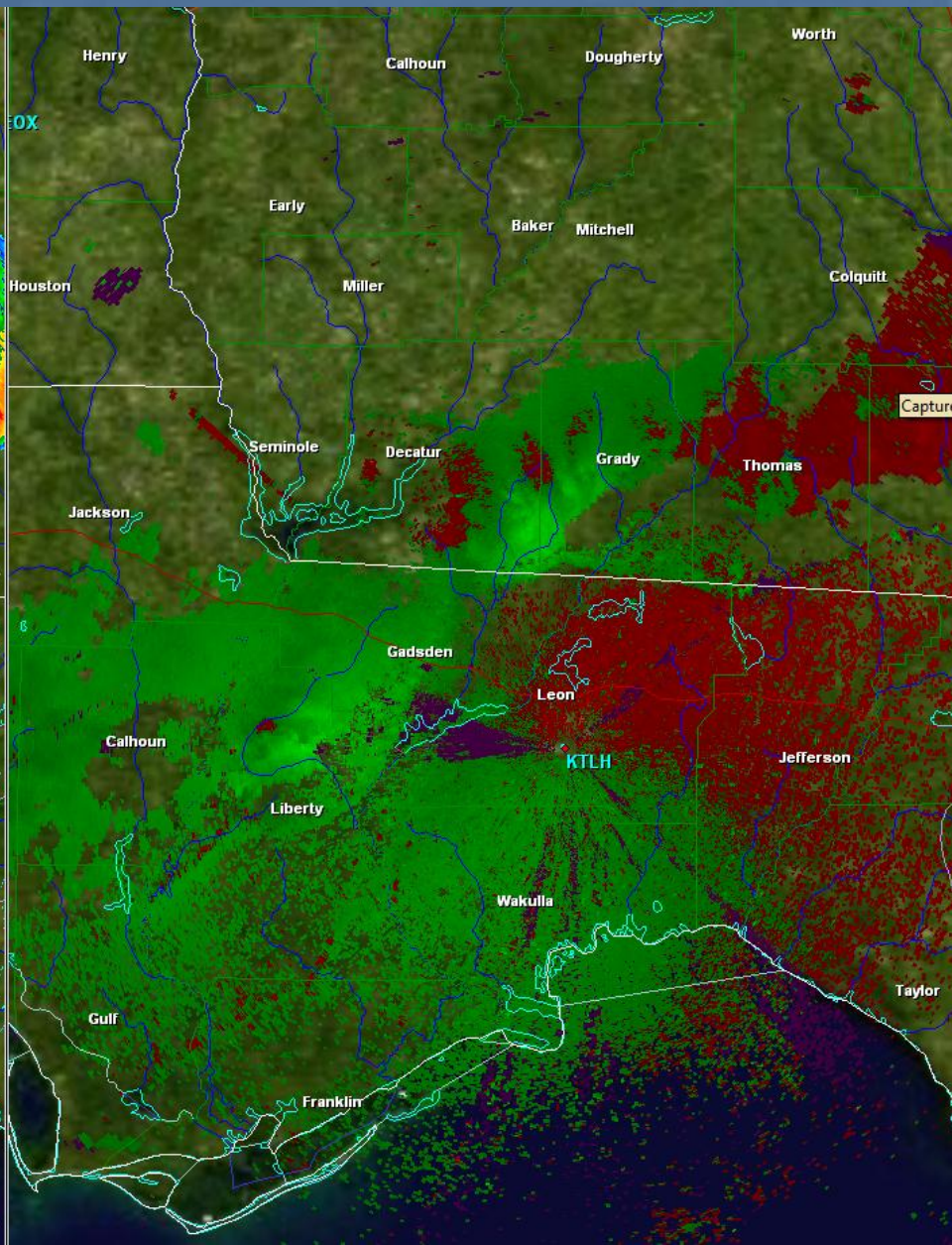
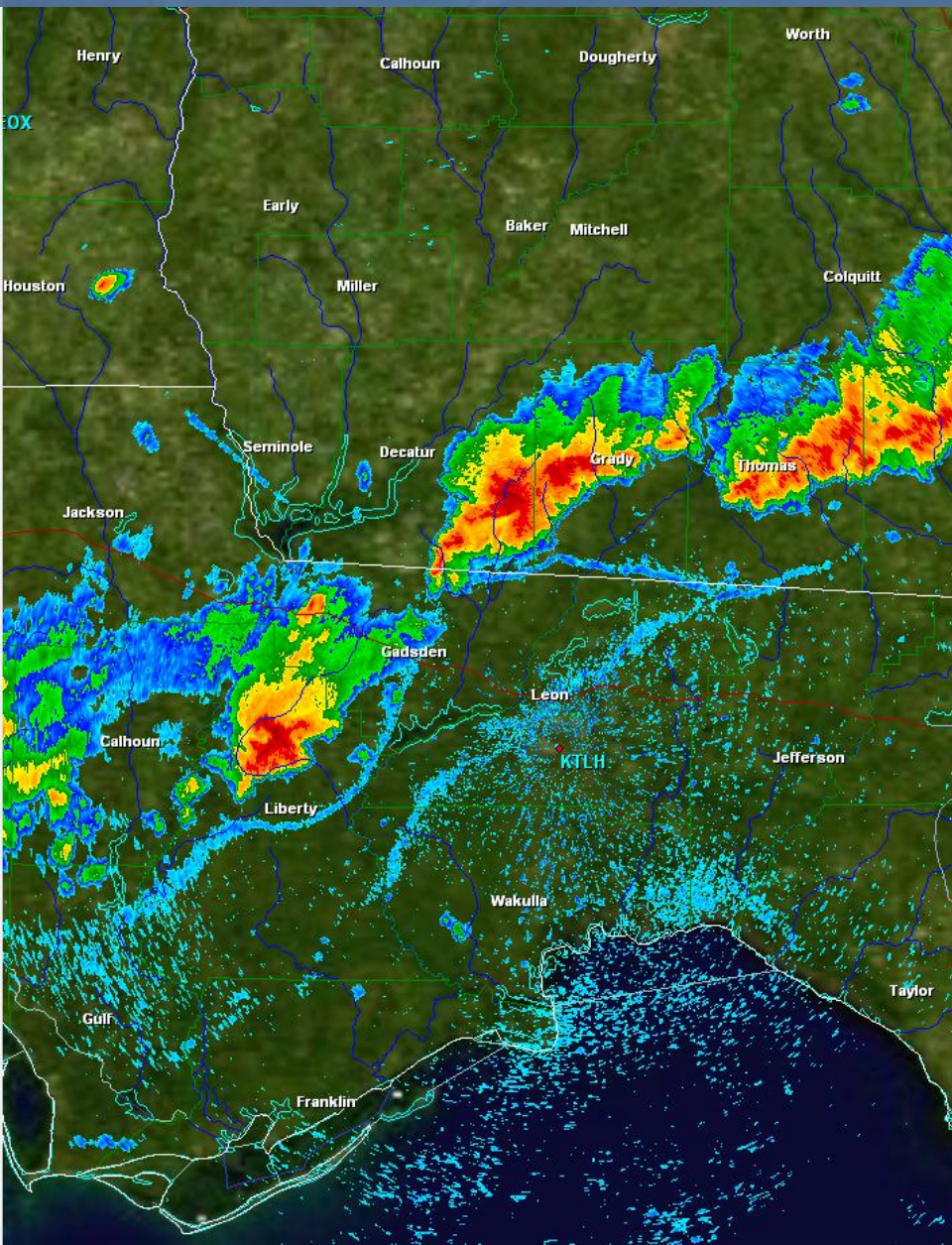
- Severe hail is most likely in June or July.

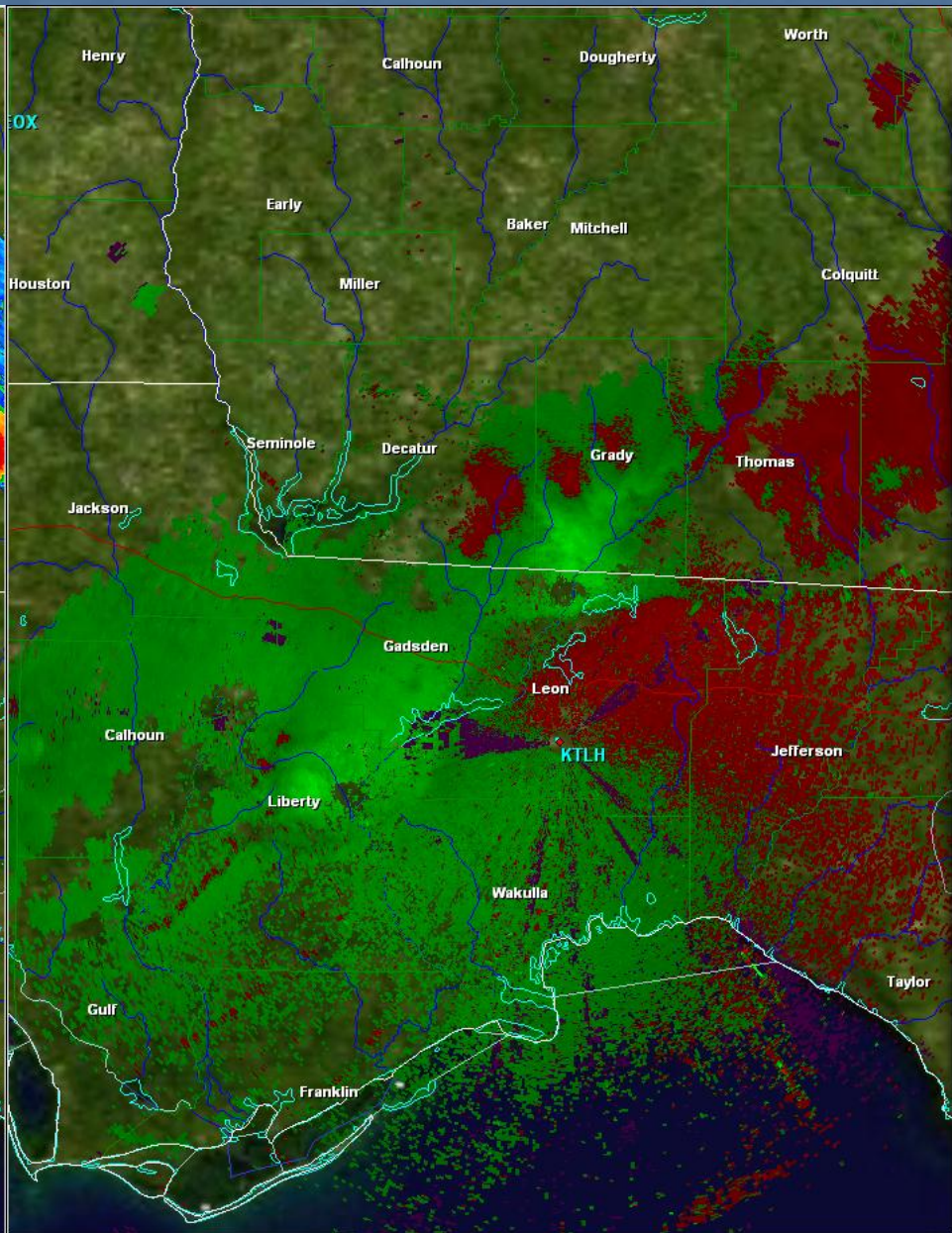
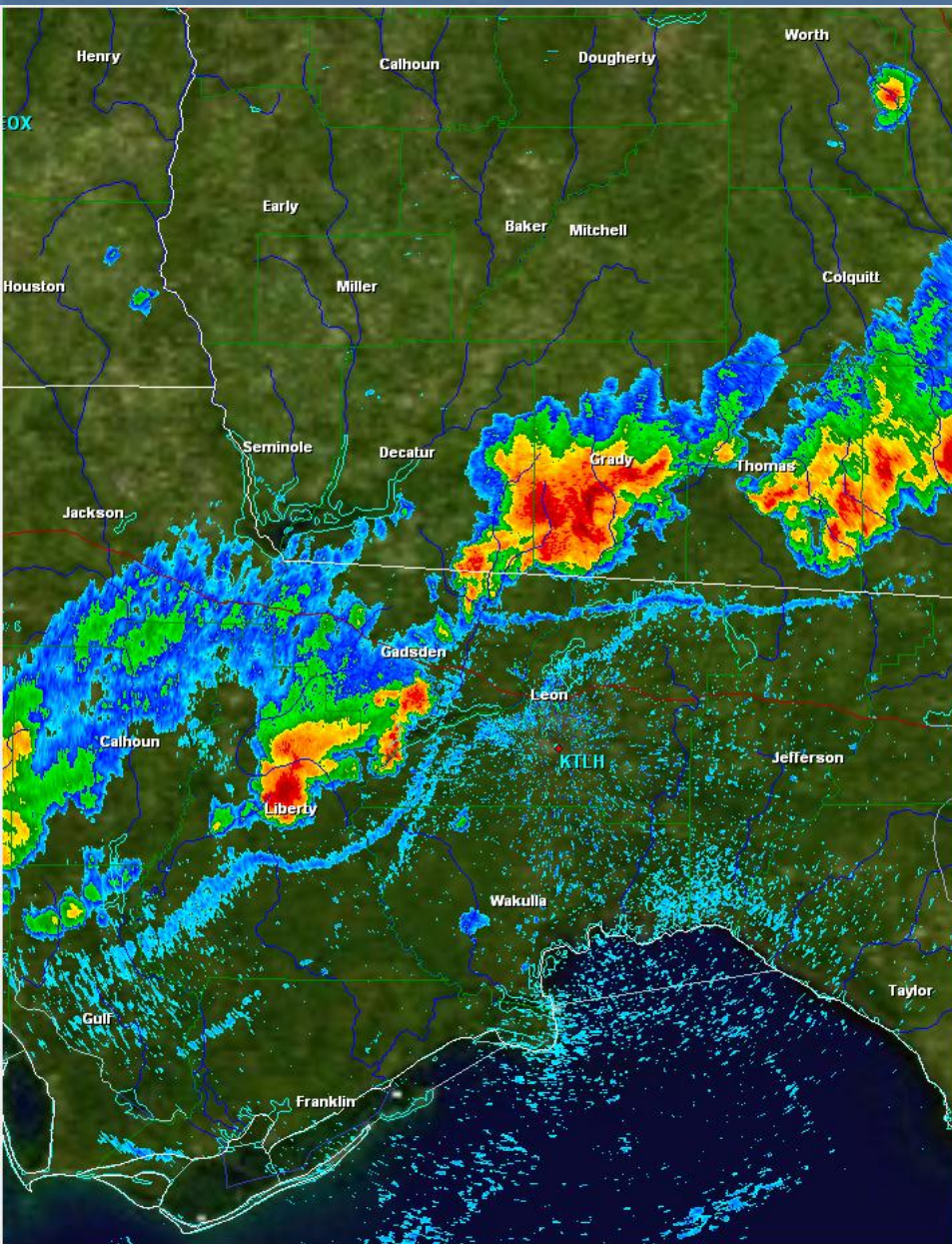


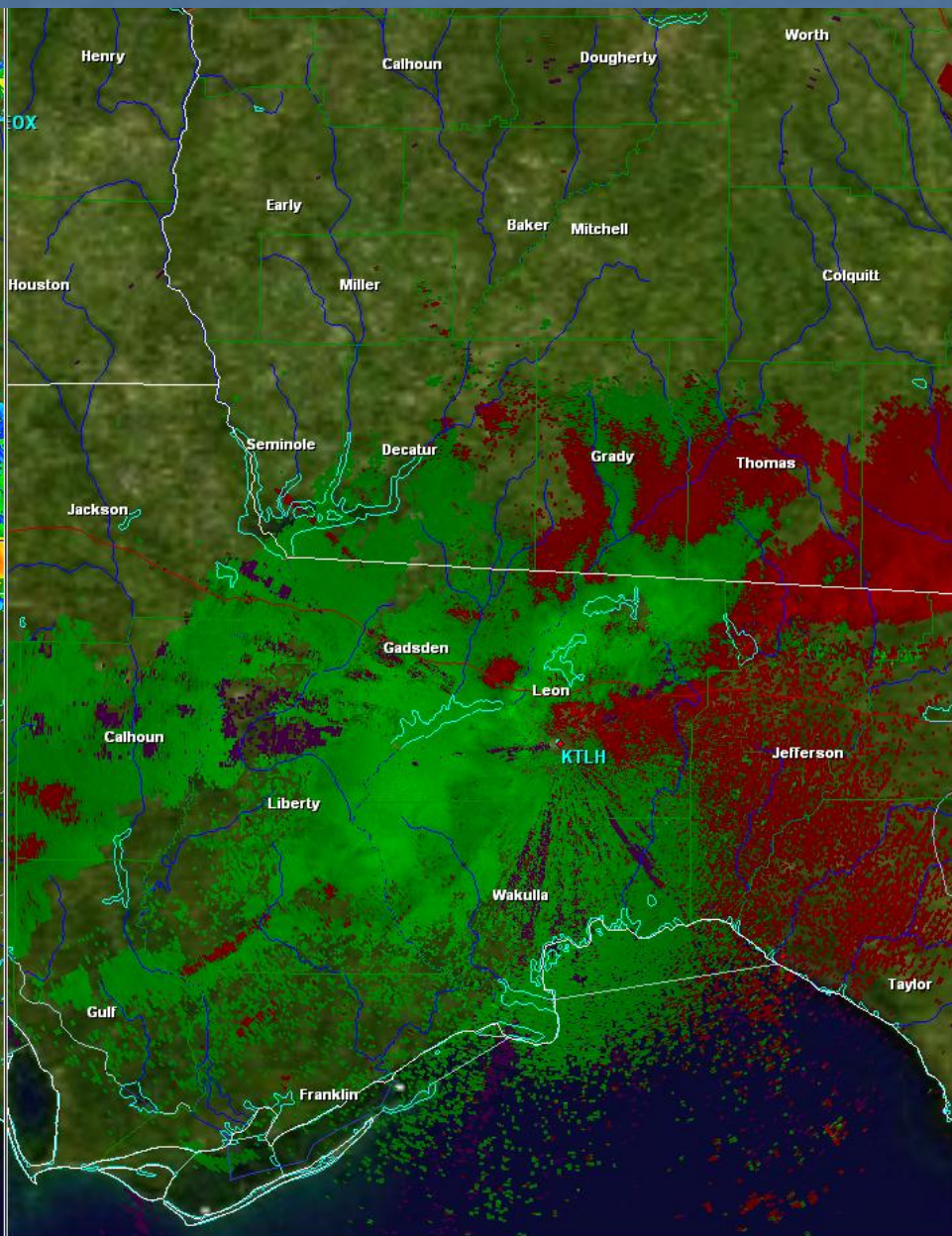
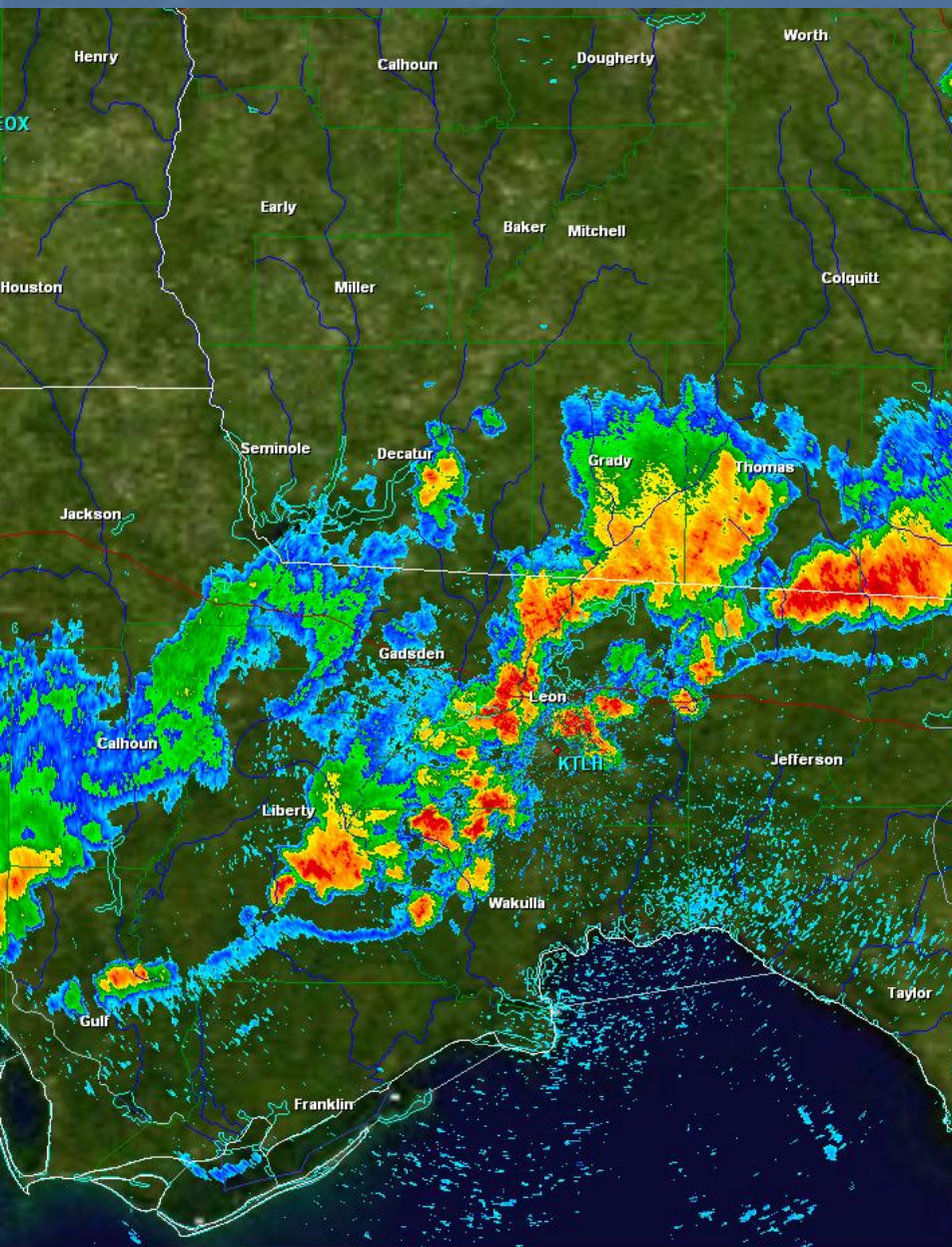
Surface Chart – 4 pm ET

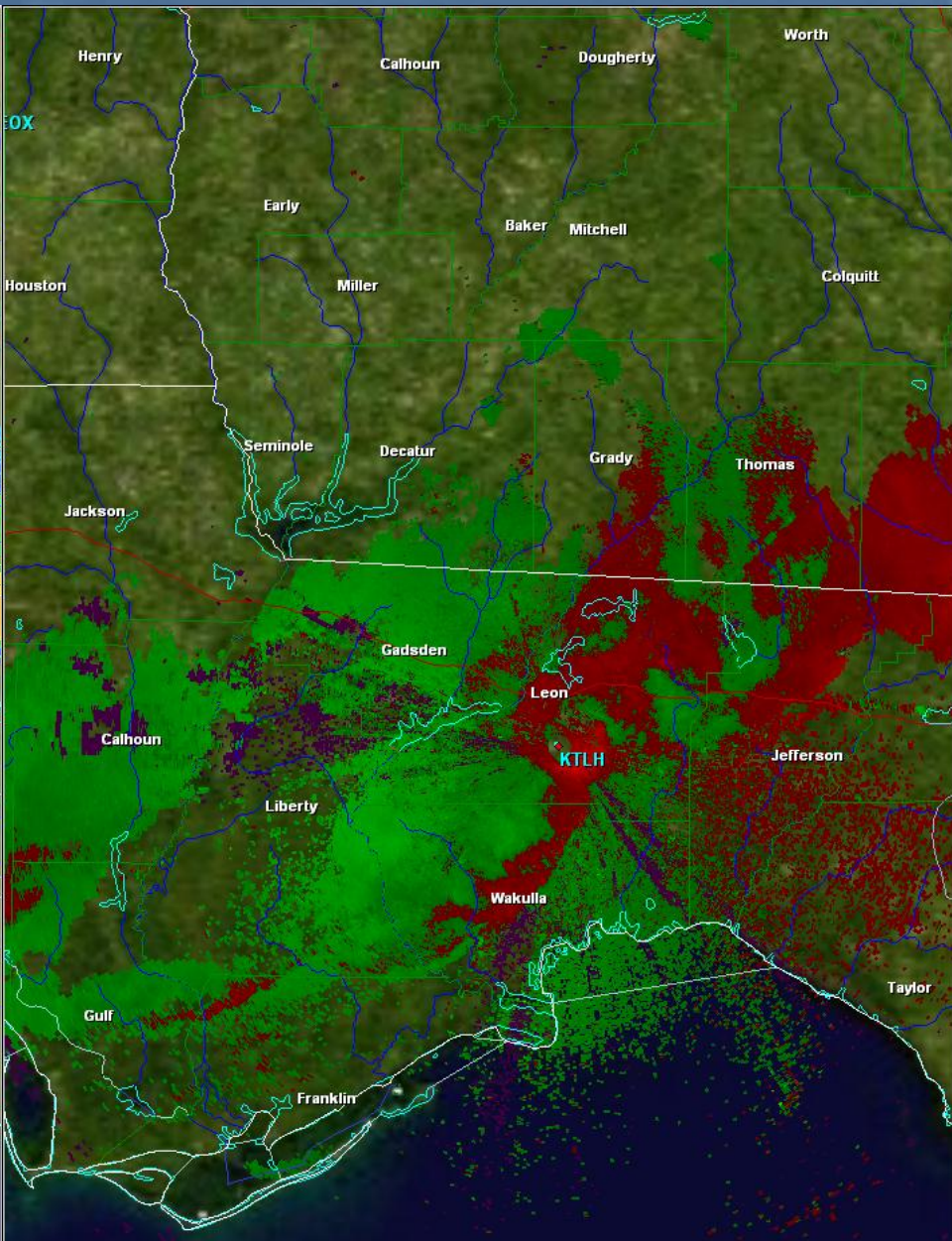
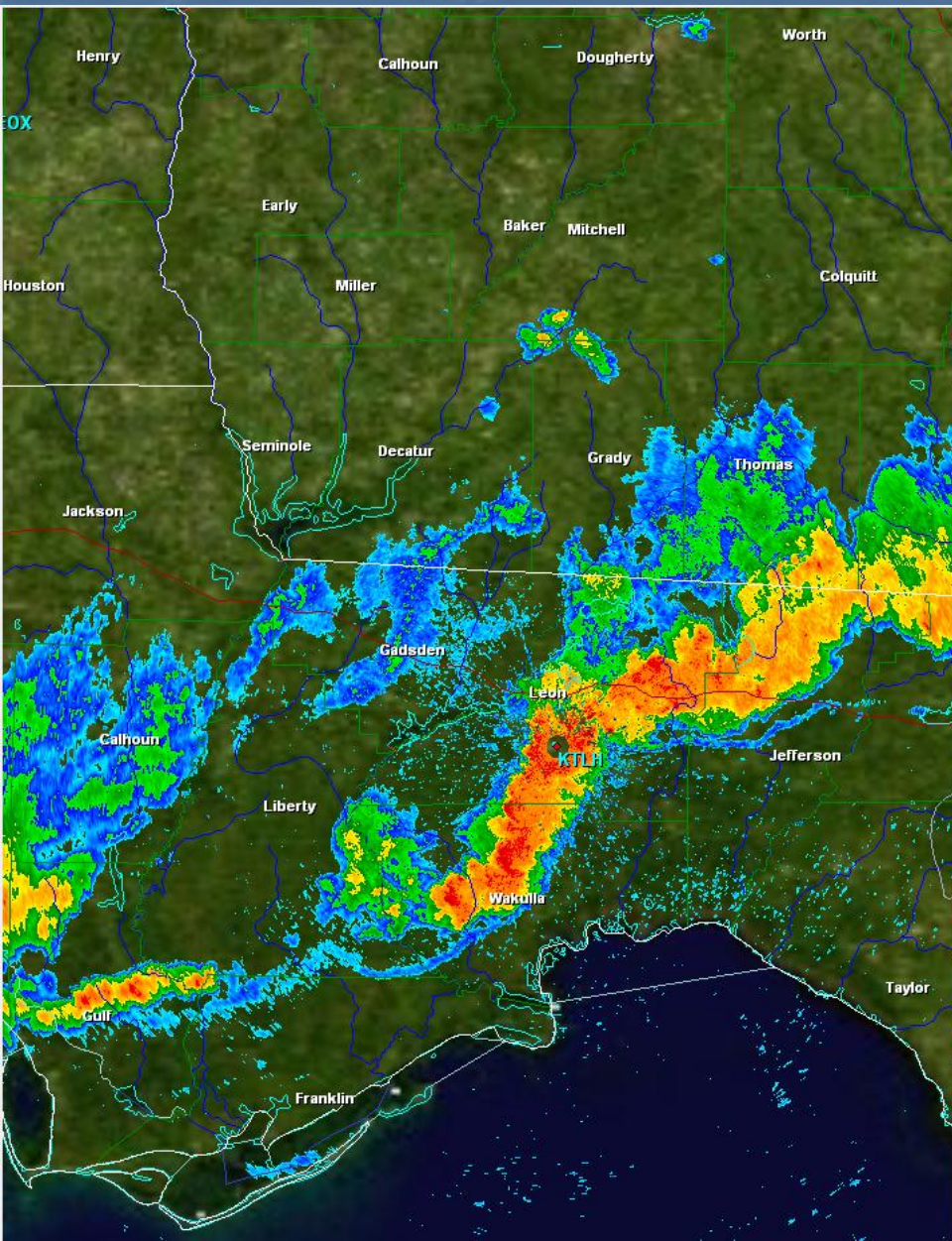


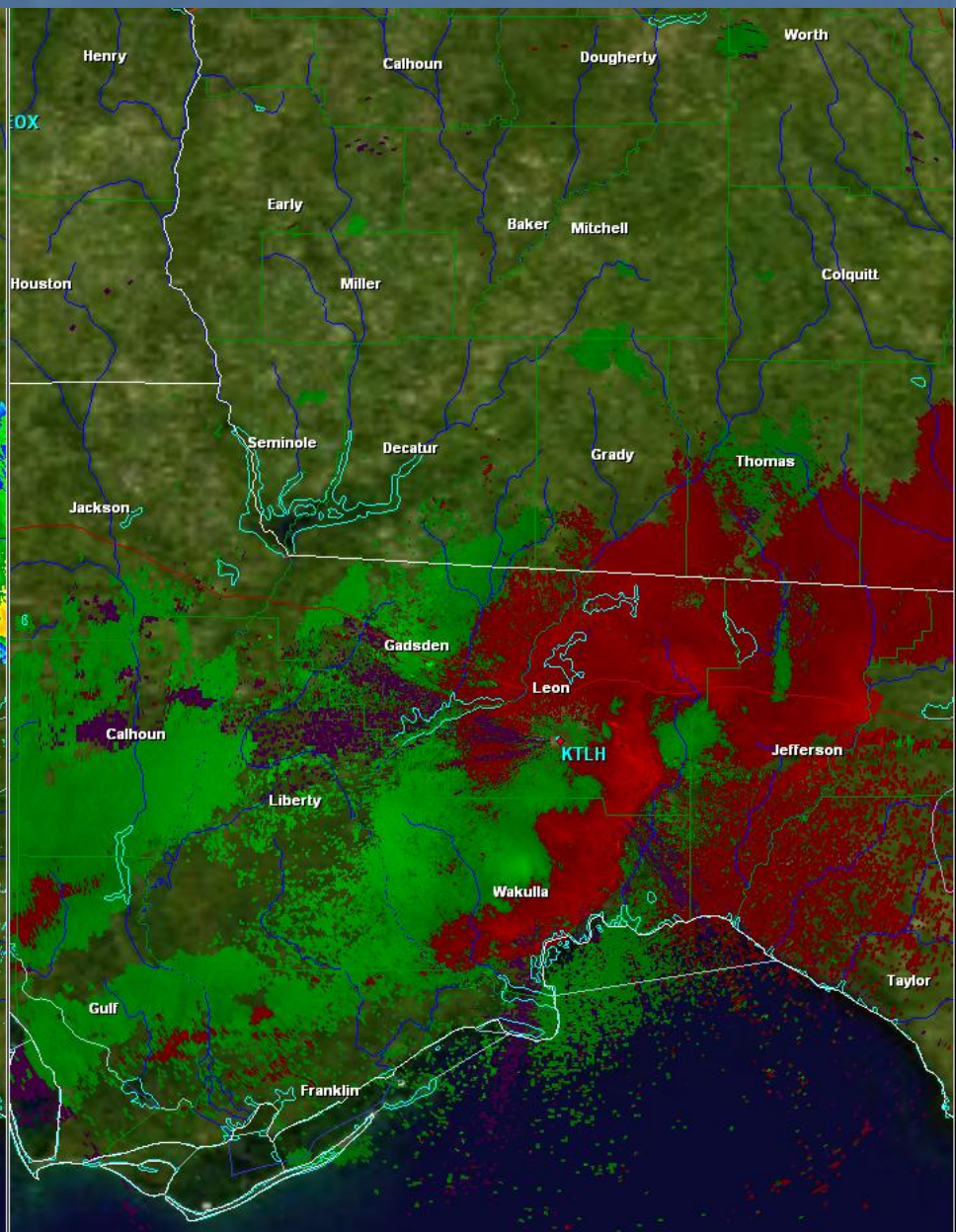
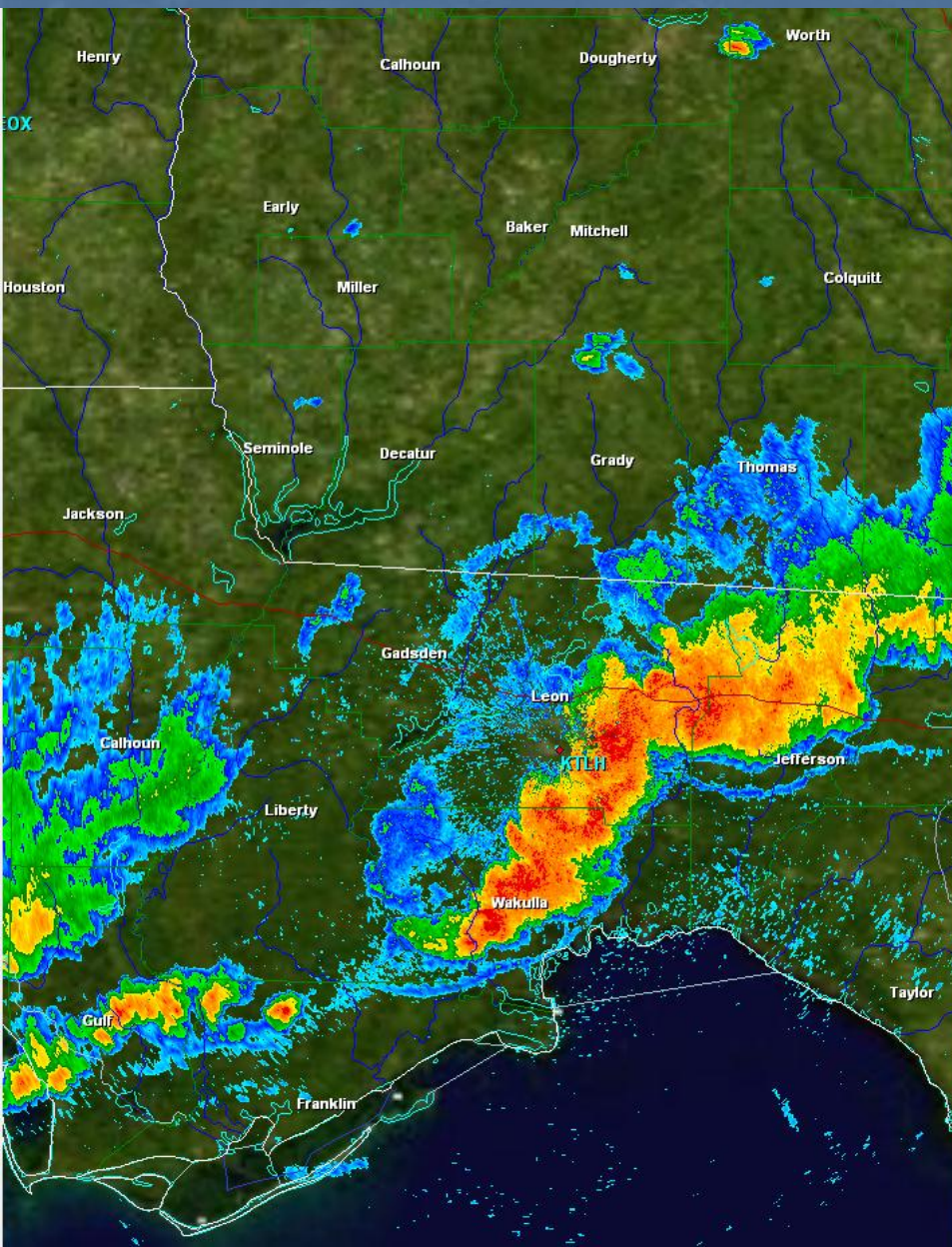














1801

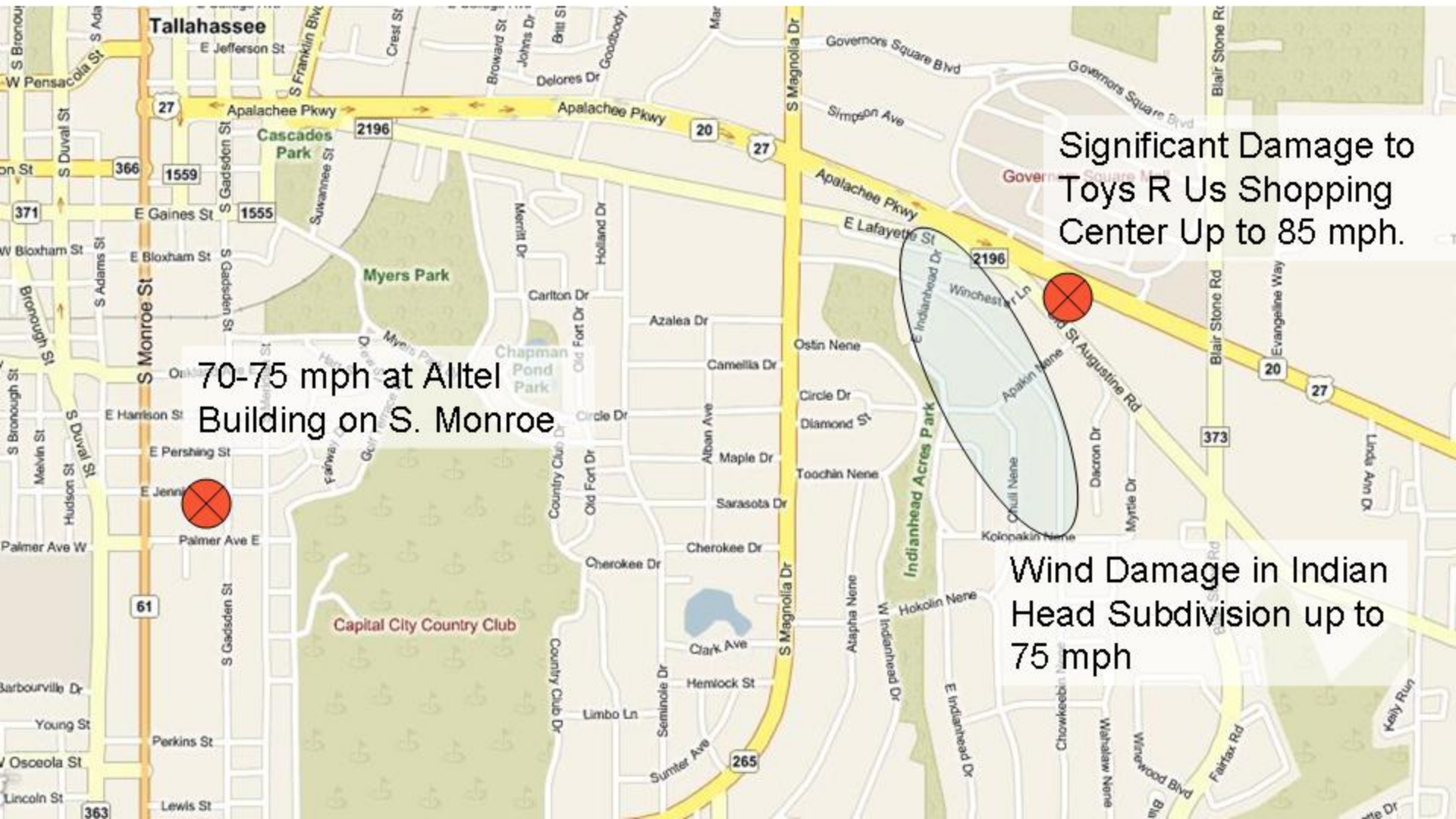
E

FOR LEASE
Call 1-800-555-1234



Storm Survey Map from Thursday, June 2, 2009 Storm

Straight line wind event with maximum winds up to 85 mph. Most concentrated damage was at the Toys R Us Shopping Center near Apalachee Parkway. Maximum damage width was approaching one half mile in Indian Head Subdivision.



Tropical Stuff

Basic Tropical Definitions

- Tropical Depression: A tropical cyclone that has maximum sustained winds 38 mph or less.
- Tropical Storm: A tropical cyclone that has maximum sustained winds between 39 mph and 73 mph.
- Hurricane: A tropical cyclone that has maximum sustained winds of 74 mph or greater.
- Major Hurricane: A tropical cyclone that has maximum sustained winds of 111 mph or greater.
- Saffir-Simpson Hurricane Scale: The rating system for hurricanes based on maximum wind speed.

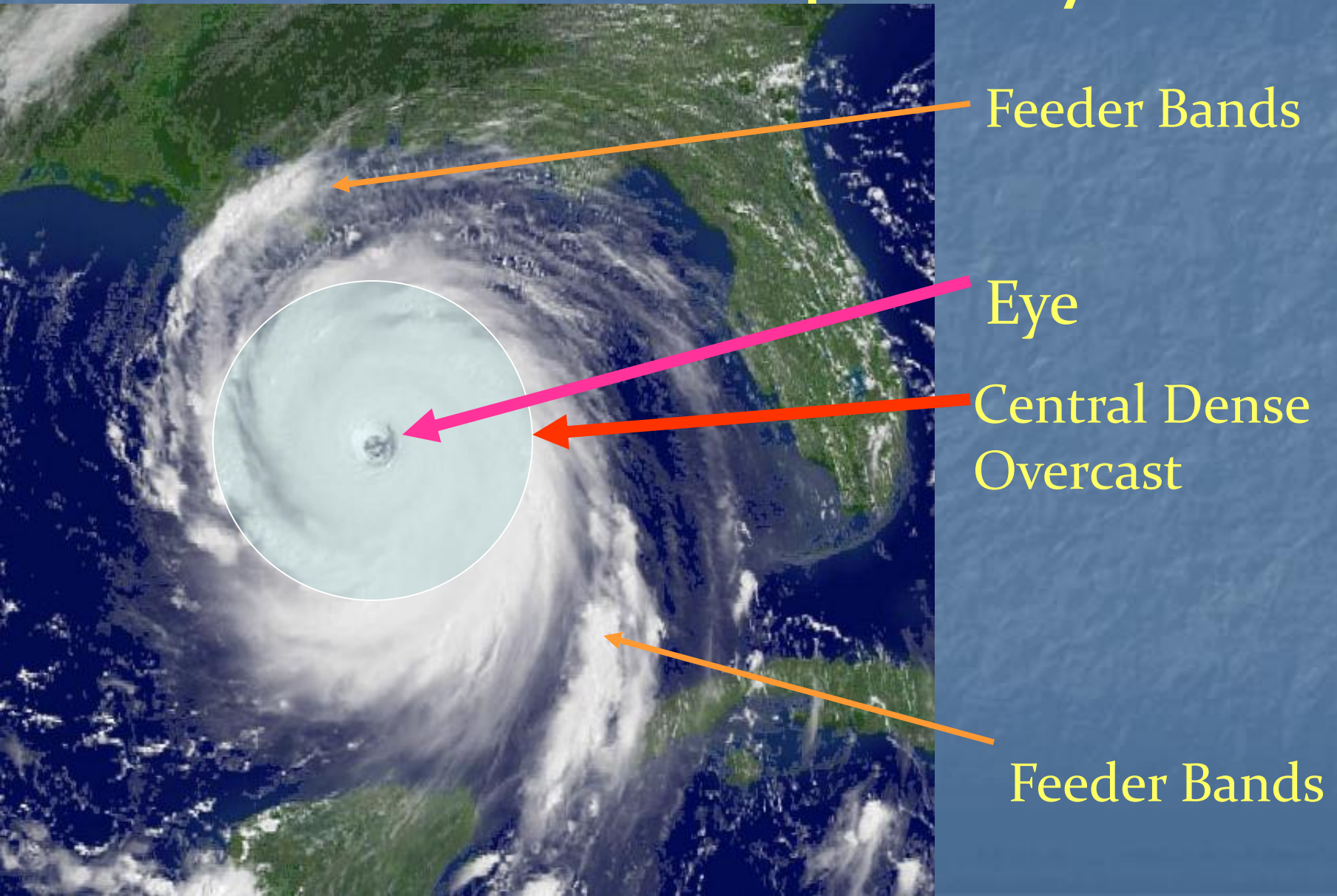
Important changes for the 2011 Hurricane Season

- Inland wording from Hurricane/Tropical Storm products has been removed. All tropical watches and warnings will share the same name.
- Minor Format Changes to Hurricane Local Statement
- As a reminder:
 - ***Hurricane/Tropical Storm Watches now mean conditions are possible within 48 hours.***
 - ***Hurricane/Tropical Storm Warnings now mean conditions are expected within 36 hours.***

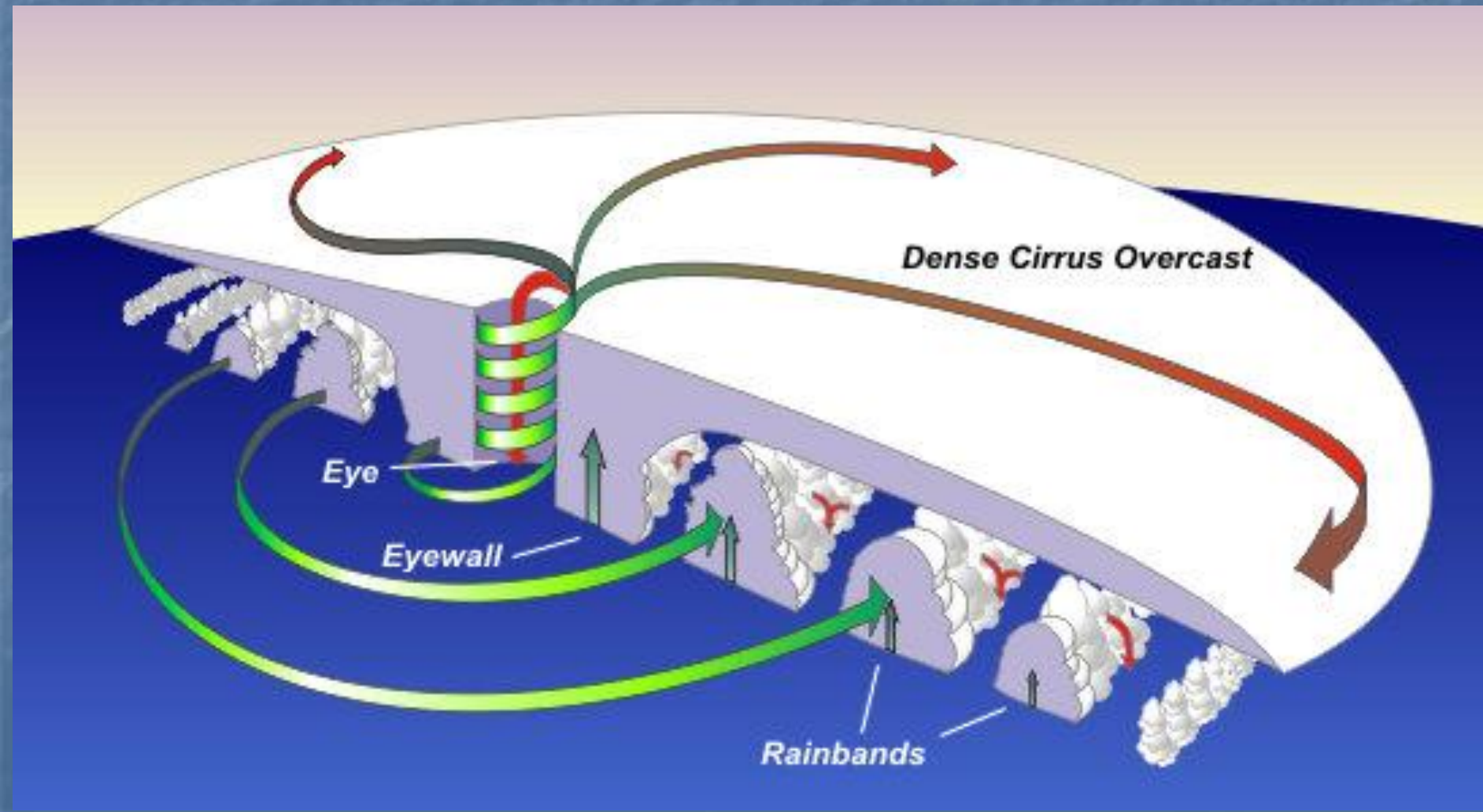
Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed Range <small>(peak 1-minute wind)</small>
1	74-95
2	96-110
3	111-130
4	131-155
5	156-??

Structure of a Tropical Cyclone



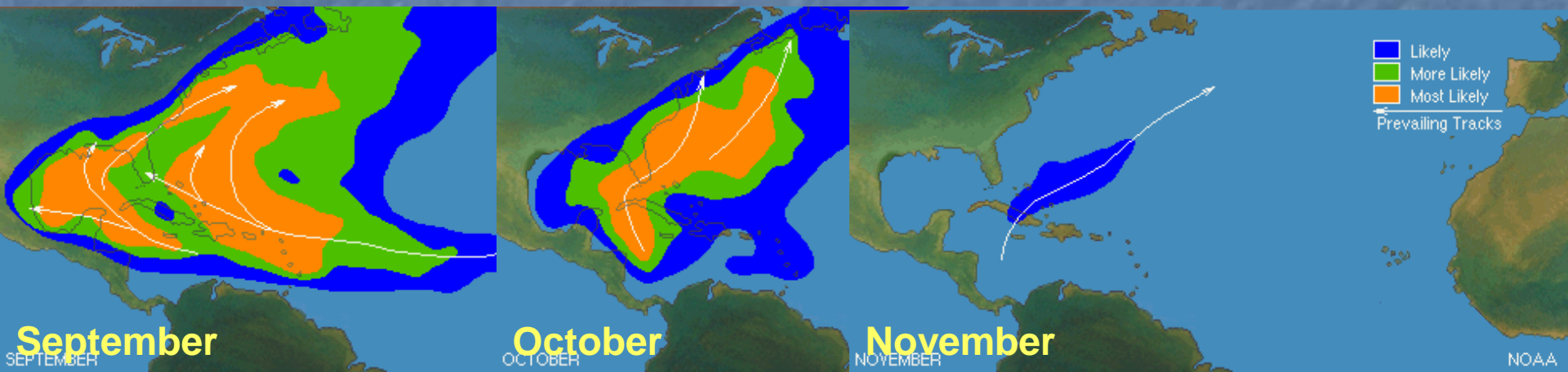
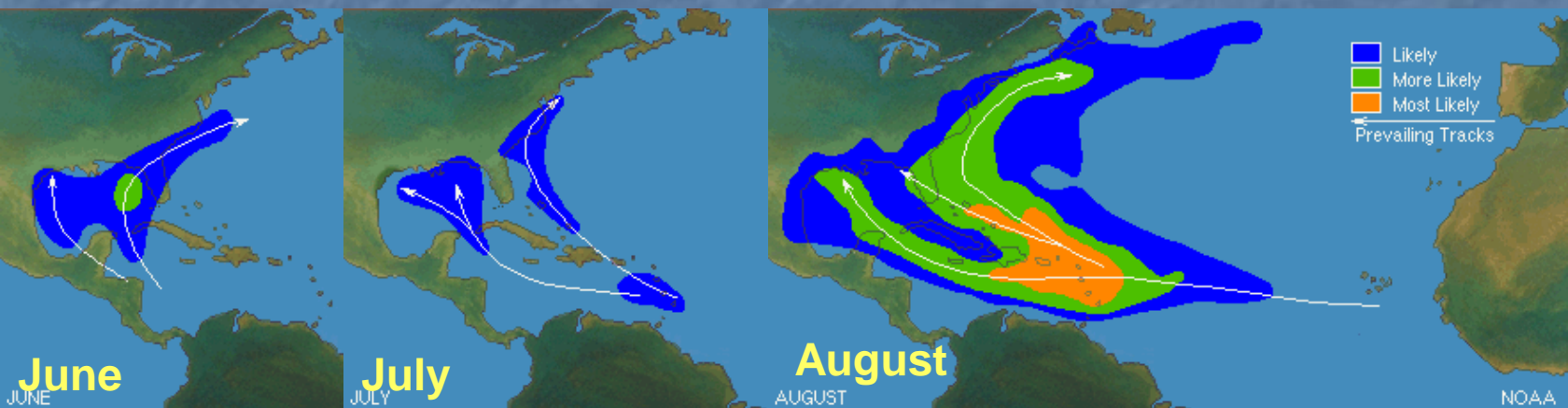
Cross Section of a Hurricane



What the Hurricane Hunters Saw in Katrina



Development from June to November



Storm Names – Where did they come from?



Prior to 1953 meteorologists informally named tropical systems to keep track of multiple active storms.

Starting in 1953, a list using only female names was introduced.

In 1970, HeeHaw provided their explanation for the hurricane naming system.



- *“I wonder why they only use girls names for hurricanes?”*

- *“Well, have you ever heard of a himicane?”*

2011 Storm Names

Arlene	Bret
Cindy	Don
Emily	Franklin
Gert	Harvey
Irene	Jose
Katia	Lee
Maria	Nate
Ophelia	Philippe
Rina	Sean
Tammy	Vince
Whitney	

Replacement
name (2005)



Florida's 'Forgotten Coast' Hurricane History

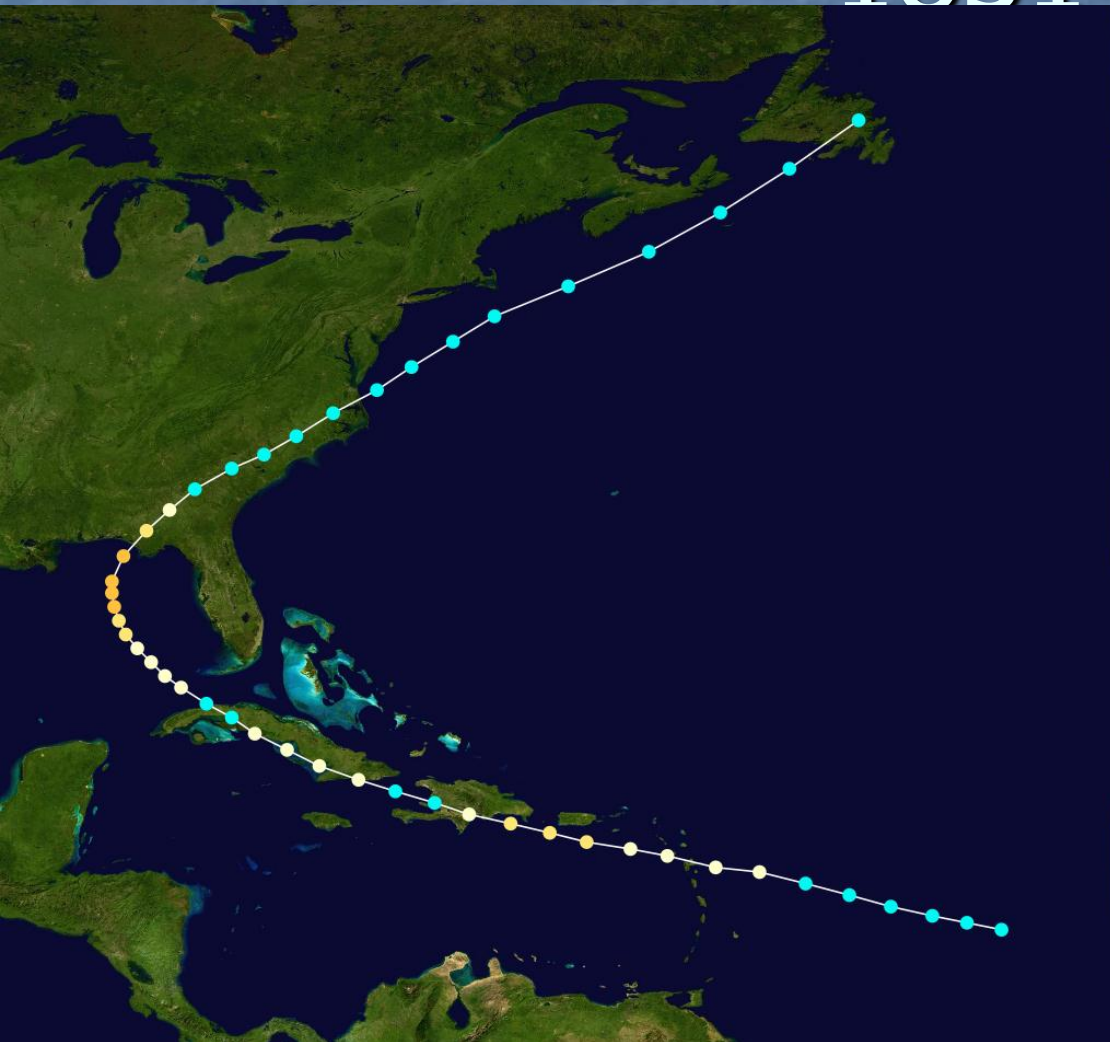


- 1. Aug 30, 1837** – Major hurricane lands near Apalachicola. It and St. Joseph 'wrecked'.
- 2. Sept 14, 1841**– Major Hurricane. St Joseph 'completely destroyed'.
- 3. Oct. 4, 1842** – Major hurricane hits St Marks with 20' surge into Cedar Key. Tallahassee suffers major damage (est. over \$11 million today) with roads in all direction blocked by thousands of downed trees.
- 4. Sept 13, 1843**– Cat. 2 Hurricane wipes Port Leon off map (6 S of St Marks). 10' storm surge reported as 'tidal wave'.
- 5. Aug. 30, 1850**– Major hurricane (The Great Middle-Florida Hurricane) lands near Apalachicola. 12'+ storm surge in St Marks. 'Most savage storm in Apalachicola history'. Much of town completely destroyed.
- 6. Aug. 24, 1851** – Apalachicola hit with major hurricane. 12+ surge and major damage in St. Marks.
- 7. Oct. 9, 1852** – Cat. 2 hurricane strikes St Marks.
- 8. Sept. 19, 1873** – St. Marks struck with heavy damage reported in Tallahassee.
- 9. Oct. 3, 1877** – Major hurricane lands near Apalachicola with 12' storm surge.
- 10. June 21, 1886** – Cat. 2 storm lands near St Marks.
- 11. June 30, 1886** – Cat. 2 storm lands near Apalachicola.
- 12. Aug. 2, 1898** – Cat 1 storm causes damage in Apalachicola after crossing SW FL.
- 13. Aug. 1, 1899** – Cat. 2 storm in Franklin county. Major damage in Apalachicola.
- 14. Oct. 7, 1941** – Minimal cat. 1 storm makes landfall near Carabelle after striking Miami two days earlier. Winds near 75 mph were measured at Carabelle, and 5 men drowned at Panacea with this storm.
- 15. June 9, 1966** – Cat. 2 hurricane Alma lands near Apalachicola. 75-100 mph winds estimated across Wakulla county.
- 16. Nov 21, 1985** – Hurricane Kate lands near Mexico Beach with 95 mph winds. Widespread wind damage into Tallahassee which had power outages for weeks.

1830s and 1840s

- 1837 to 1843, 4 hurricanes (3 major) struck between Gulf County and Wakulla County
- 1841 – St Joseph (Gulf County) completely destroyed and never rebuilt
- 1843 – Port Leon (Wakulla County) completely destroyed by surge. Town moved 3 miles north and renamed “Newport”

Great Middle Florida Hurricane - 1851



- Benchmark storm for North Florida
- Winds in excess of 115 mph
- Hurricane force winds extended well into Southwest Georgia
- Tallahassee Sentinel states "tall forest oaks were uprooted or snapped asunder..."

1851 Hurricane – More Info

- In Apalachicola, “The wind apparently blew for more than 20 hours, leveling houses of all sizes”
- In Saint Marks the storm tide was in excess of 12 feet. Residents were forced from their homes and forced to swim or float on debris.
- Port Leon was the 6th largest city in Florida at the time with 1500 residents.

DESTRUCTION IN FLORIDA

Three Towns Completely Annihilated by the Cyclone Wednesday.

MANY VESSELS TOTAL WRECKS

Unidentified Dead Bodies Are Found in the Debris—Losses Over a Million Dollars.

RIVER JUNCTION, Fla., Aug. 4.—The most disastrous cyclone that ever visited this section of Florida completely annihilated Carrabelle, McIntyre, and Lanark Inn, south of here Wednesday.

At Carrabelle only nine houses remain of a once beautiful and prosperous town. Communications from the Mayor state that 200 families are without homes or shelter, and many are completely destitute.

Of McIntyre only two mill boilers mark the site of the town.

Lanark Inn, the famous Summer resort, was blown into the Gulf.

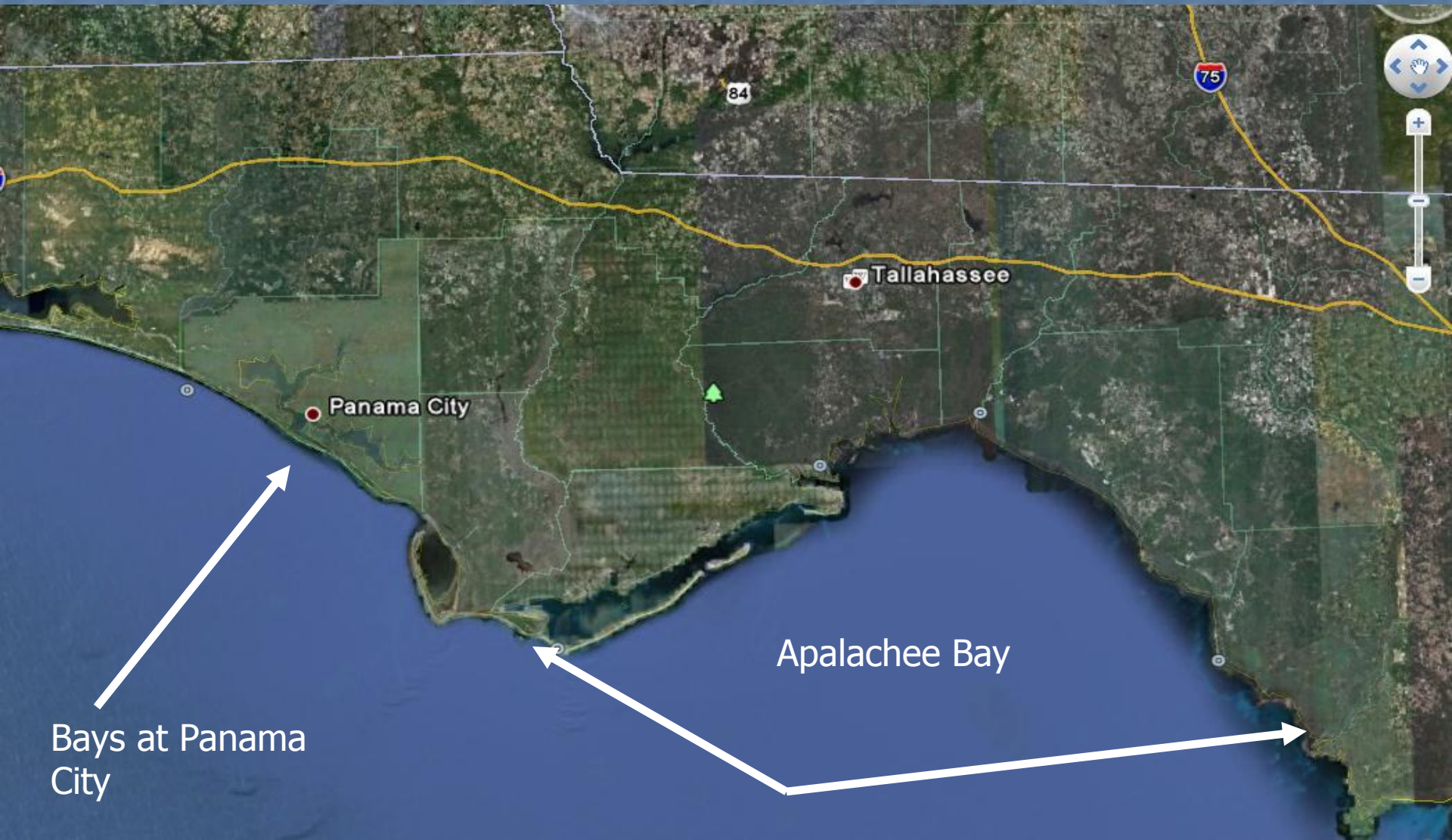
The Carrabelle, Tallahassee and Georgia Railroad is washed away for a distance of thirty miles. A passenger train was blown from the track more than 100 yards. Many passengers were injured, but their names are unobtainable.

Mary Williams, colored, was killed at Carrabelle. Numerous other people had legs and arms broken. Daniel Neel of Apalachicola had his back broken, and is not expected to recover. No fatalities are reported from McIntyre and Lanark.

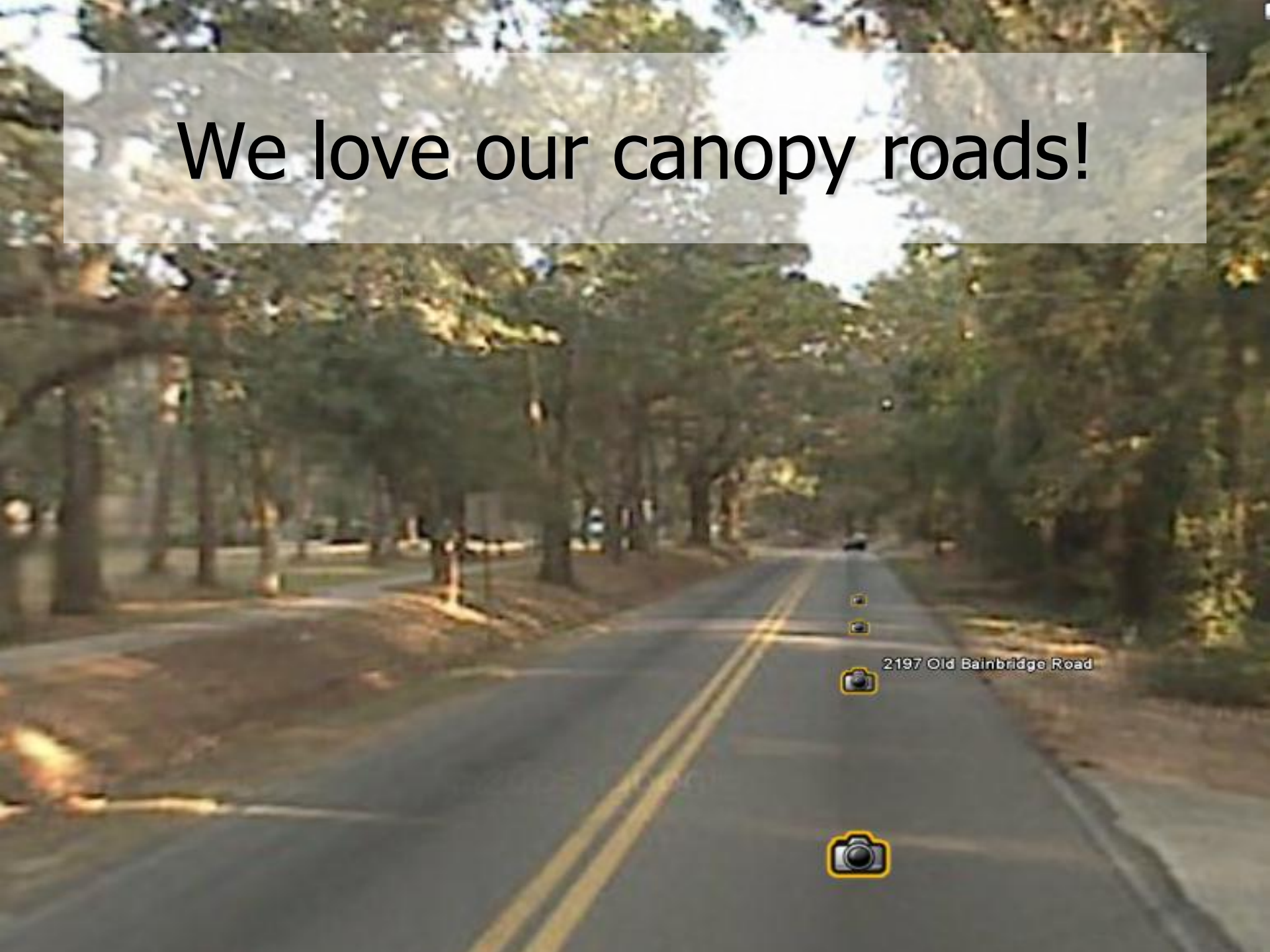
1899 Hurricane



Why we are worried - Geography



We love our canopy roads!



Tools to use

- Our main page: <http://www.srh.noaa.gov/tlh>
- Graphical Hazardous Weather Outlook
- Ridge Radar Display

You are at: [NWS Home](#) » [SRH Home](#) » [WFO Tallahassee Home](#) » Graphical Hazardous Weather Outlook

Today's Weather Impact Levels

(click on specific hazard for details)

Lightning	Tornado	Prevailing Wind	Hail and/or TS wind	Inland Flood	Coastal Flood	Surf & Rip Currents	Waves	Visibility	Heat/Cold
None	None	None	None	None	None	Low	Slight	None	None

Lightning Hazard

Lightning Hazard Tuesday Mar 11

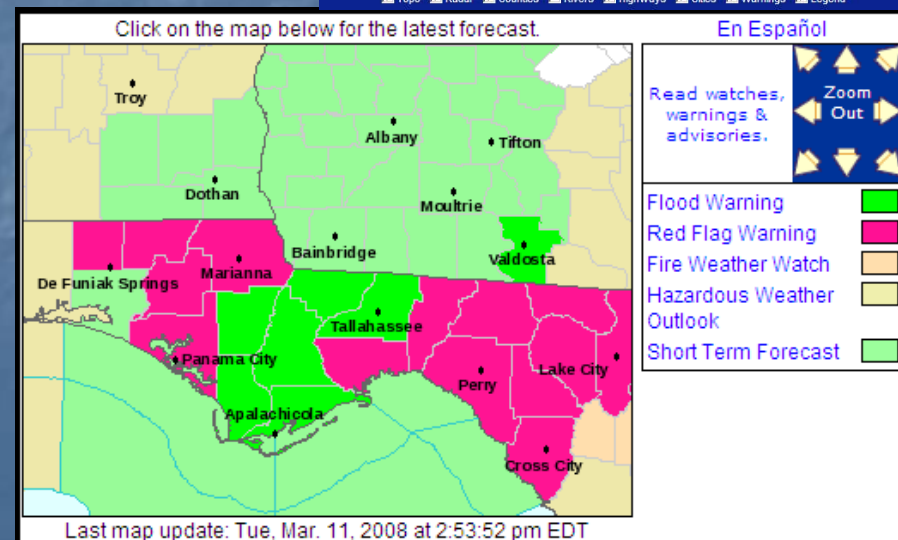
NWS Tallahassee Area

Legend (Click for Impacts)

None	No lightning
Slight	Frequency <45 strikes per 15 min (<3 strikes per min)
Moderate	Frequency 45-80 strikes per 15 min (3-6 strikes per min)
High	Frequency 81-120 strikes per 15 min (6-8 strikes per min)
Extreme	Frequency >120 strikes per 15 min (>8 strikes per min)


Lightning Impact Statement

For additional hazard information, view the full [Hazardous Weather Outlook](#) text.



Storm Prediction Center

- Provides daily outlook for organized severe weather.
- Outlooks for Day 1, Day 2, Day 3, and Days 4-8 issued daily
- Threat levels of Slight, Moderate, or High
- <http://www.spc.noaa.gov>



NOAA's National Weather Service Storm Prediction Center

Site Map News Organization

Search for: ☐ NCEP ☒ All NOAA

Local forecast by "City, St" or "ZIP"

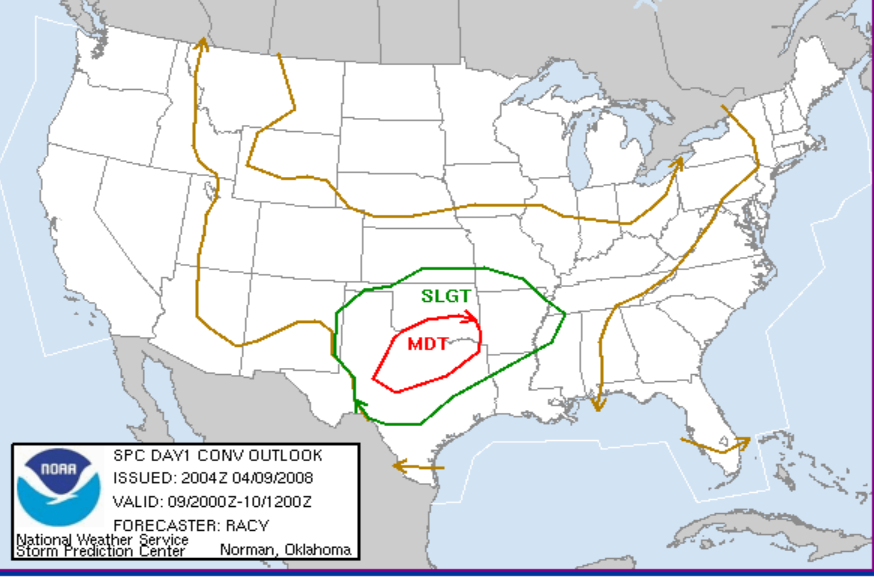
Overview
SPC Products
All SPC Forecasts
Current Watches
Meso. Discussions
Conv. Outlooks
Fire Wx Forecasts
[XML](#) [RSS Feeds](#)
Weather Information
Storm Reports
Watch/Warning Map
National RADAR
Product Archive
Norman, OK WX
Research
Non-op. Products
Forecast Tools
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SPC FAQ
About Tornadoes
About Derechos
WCM Page
Enh. Fujita Page
Cool Images
Our History
Public Affairs
Misc.
Staff
Links
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SPC Feedback


Moderate Risk for severe storms...

- Latest Public Severe Weather Outlook.
- The following Weather Watches are currently in effect:
0178...0179...0180...0181...
- The following Mesoscale Discussions are currently in effect:
0606...0607...

More news items below the overview graphic. Updated: Wednesday, 09-Apr-2008 19:10:22 CDT

[Overview](#) | [Conv. Outlooks](#) | [Watches](#) | [MDs](#) | [WWA](#) | [Reports](#) | [Mesoanalysis](#) | [Fire](#)





SPC DAY1 CONV OUTLOOK
ISSUED: 2004Z 04/09/2008
VALID: 09/2000Z-10/1200Z
FORECASTER: RACY
National Weather Service
Storm Prediction Center Norman, Oklahoma

Hazard	Wed (04/09)	Thu (04/10)	Fri (04/11)	Sat (04/12)	Sun (04/13)	Mon (04/14)	Tue (04/15)	Wed (04/16)
Severe	Moderate	Moderate	Slight	No Area	No Area	No Area	No Area	No Area
Fire	Extreme	Extreme	Critical	No Area	No Area	No Area	No Area	No Area

Click on the hazard matrix cell to navigate to the specific forecast.

[Other News](#) (Updated: April 04, 2008)

Moving your mouse over these buttons will provide you with a quick view of the daily threat along with the location of any watches or severe weather reports

This summary box gives you an idea of what the maximum threat for severe weather is across the entire country.

Lightning Safety



Copyright Chris Gullikson

Lightning Safety

- Lightning strikes the Earth 20 million times per year, on average.
- Most lightning fatalities and injuries occur when people are caught outdoors in the summer months.
- The safest place to remain is indoors and away from windows and electrical appliances
- Avoid being the tallest object, and stay away from other tall objects such as isolated trees.
- If you can hear thunder, you are in danger of being struck by lightning. Take shelter.



Lightning Myths

Myth: If it is not raining, then there is no danger from lightning.

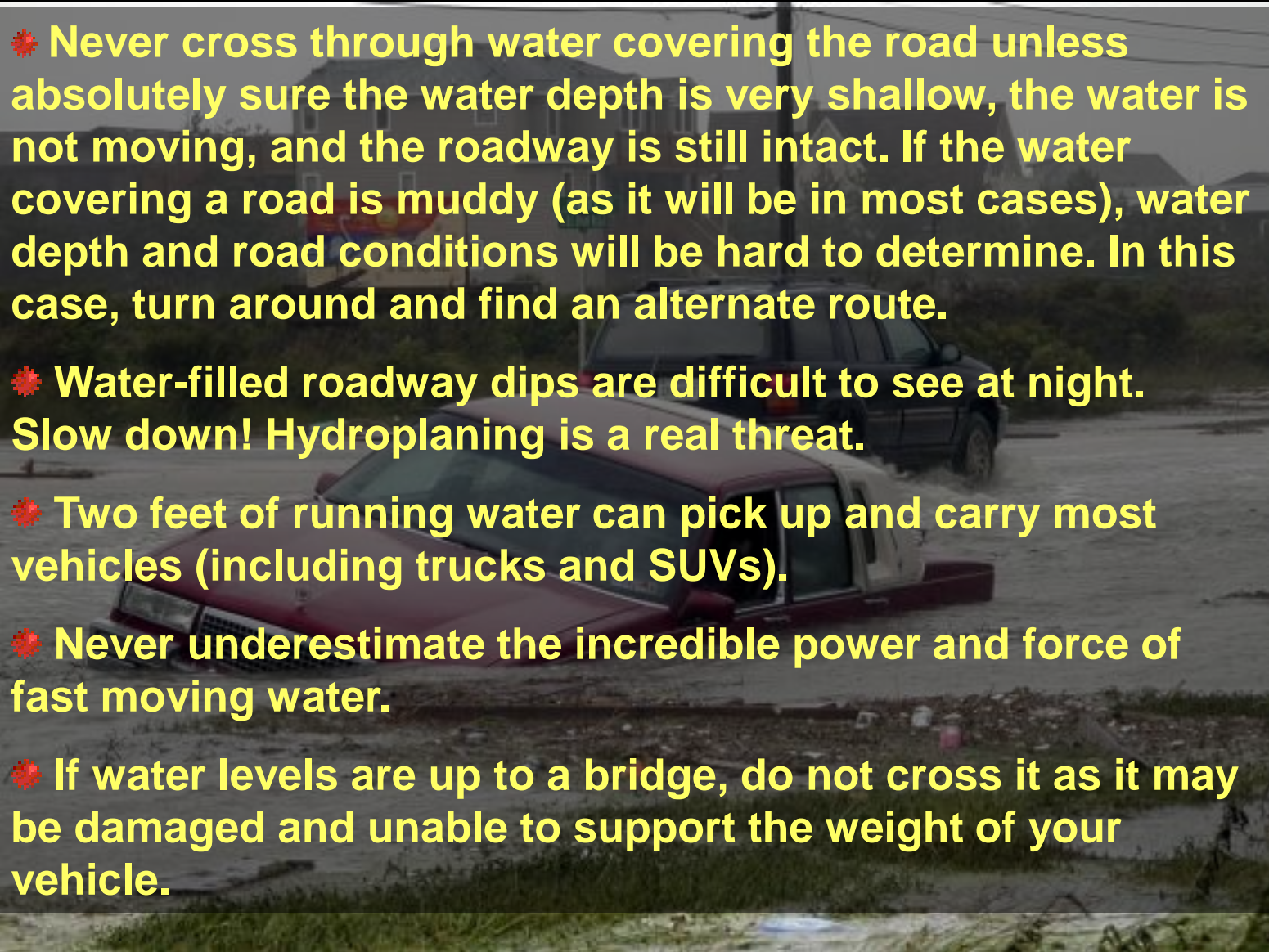
Truth: Lightning often strikes out of heavy rain and may occur as far as 10 miles away from any rainfall. (Bolt out of the blue.)

Myth: The rubber sole of shoes or rubber tires on a car will protect you from being struck by lightning.

Truth: Rubber-soled shoes or rubber tires on a car provide no protection from lightning. The steel frame of a hard-topped vehicle provides increased protection if you are not touching metal. You are much safer inside an enclosed vehicle than standing outside.



Flood Safety

- 
- ❖ **Never cross through water covering the road unless absolutely sure the water depth is very shallow, the water is not moving, and the roadway is still intact. If the water covering a road is muddy (as it will be in most cases), water depth and road conditions will be hard to determine. In this case, turn around and find an alternate route.**
 - ❖ **Water-filled roadway dips are difficult to see at night. Slow down! Hydroplaning is a real threat.**
 - ❖ **Two feet of running water can pick up and carry most vehicles (including trucks and SUVs).**
 - ❖ **Never underestimate the incredible power and force of fast moving water.**
 - ❖ **If water levels are up to a bridge, do not cross it as it may be damaged and unable to support the weight of your vehicle.**

Flood Safety



**It may just be a whole lot deeper than
what you think!**

Remember, boats float, cars don't.

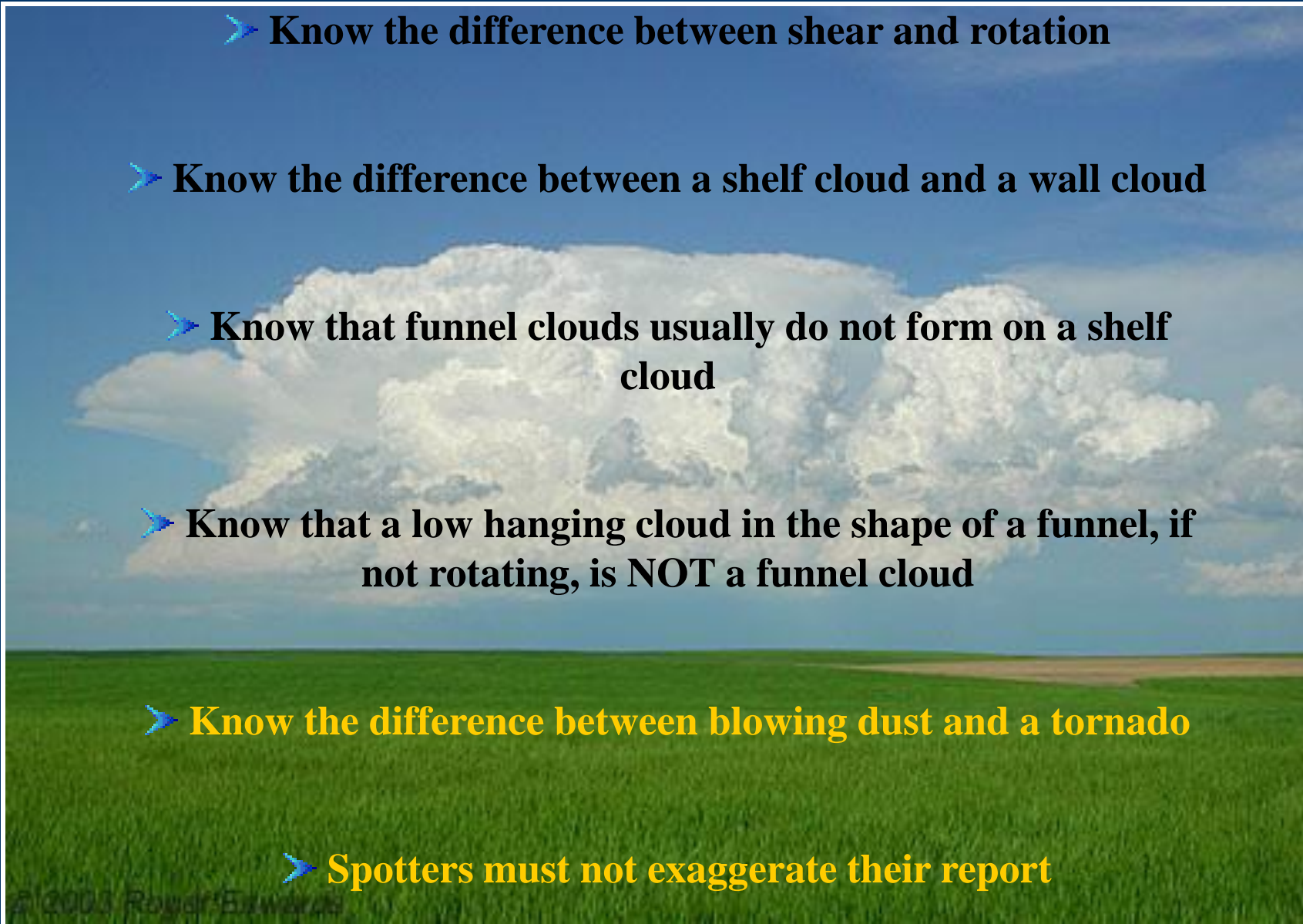


Don't risk it and become a statistic



Story County, IA

Spotters Must

- 
- **Know the difference between shear and rotation**
 - **Know the difference between a shelf cloud and a wall cloud**
 - **Know that funnel clouds usually do not form on a shelf cloud**
 - **Know that a low hanging cloud in the shape of a funnel, if not rotating, is NOT a funnel cloud**
 - **Know the difference between blowing dust and a tornado**
 - **Spotters must not exaggerate their report**

Myths

● **Myth - I heard a loud noise and it sounded like a train...it had to be a tornado.**

Truth - Any very strong wind will make a “roaring” noise or sound like a train – the sound depends on the wind speed, local terrain, obstructions to flow, and atmospheric conditions.

● **Myth - The wind twisted the metal on my shed...the trees that were blown down are twisted...it had to be a tornado.**

Truth - One generally cannot look at any individual object to determine if the damage was caused by a tornado or straight-line wind. The total damage pattern and how the debris is strewn in relation to other debris is a better indicator of the causative effect. A straight-line wind can cause an object to twist as the destructive force of the wind on an object can cause uneven stress loads with different failure points.

● **Myth - Objects like lakes, rivers, and hills protect areas from getting hit by a tornado.**

Truth – Nothing more than folklore. These features provide no protection or have any bearing on the development or movement of a tornado. Some thought tornadoes would not strike the downtown area of a large metropolitan city. Recent tornadoes in downtown Fort Worth, Salt Lake City and Nashville dispelled that myth.

Myths

● **Myth – Mobile homes attract tornadoes.**

Truth – Mobile homes are not more likely to get hit by a tornado. Mobile homes are more likely to sustain damage (compared to a house) if struck by a tornado or strong winds.

● **Myth – It is safe to seek shelter from a tornado under an overpass.**

Truth – Overpasses are not a safe place to take shelter. They can funnel the wind flow and increase the strength of the wind. They do not provide protection from flying debris. In addition, parking your car under or near an overpass creates a hazard to other motorists trying to pass through the area. Virtual traffic jams have been created by motorists gathering under an overpass. See this link for [overpass safety](#).

● **Myth – We should open our windows if a tornado approaches.**

Truth – Stay away from windows if a tornado approaches. If your windows are closed, leave them closed. Your house will not explode due to the decrease in pressure within the tornado. If the tornado is close enough to your house that it experiences a significant and rapid drop in pressure, chances are the wind and debris will have damaged or destroyed your house before the minimum drop in pressure occurred.

CoCoRaHS

**Voluntary collection of observers
monitoring rainfall, hail, and snow
in their own backyards.**

**You purchase your own rain gage
and measuring equipment**

**Submit observations daily through
the CoCoRaHS website.**

**Observation data appears on state
and national website updated daily.**

**For more information, visit :
<http://www.cocorahs.org/>**



FLORIDA COCORAHHS APRIL 2009 NEWSLETTER

Out Like A Lion?

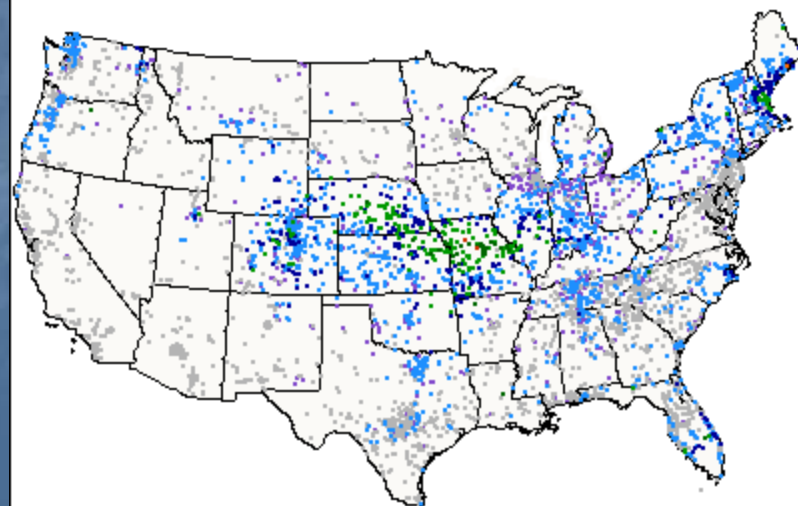
Spring has officially come to Florida... but I think someone forgot to inform Mother Nature. I woke up this morning, looking to find me on the roof of the house, on the grass and on my entire lawn. It reminded me about the Easter Festival of 2007, which did damage to a lot of agricultural industries in the Southeast U.S.

The old saying goes, "If March comes in like a lion, it will go out like a lamb." So, what happens if March comes in like a lion? Portions of the state found out over the last few weeks.

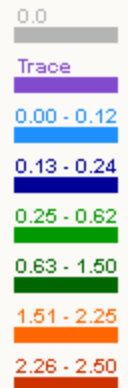
A Quick Status Update

Vermont and Arkansas were the latest states to become members of CoCoRaHS. That brings the total number of states active in the program to 47. West Virginia will be coming on board in May. Hawaii is here and Connecticut is July. If you have anyone in these areas who might be interested in becoming a volunteer observer, let them know that CoCoRaHS is up to way.

In Florida, we have slowly been approaching 800 observers. Here's a little graphic that shows where all of our observers are, and how many were active in 2008.



Daily Precipitation (inches x.xx) USA 1/20/2011



We want your storm photos!!



If you have any storm photos or videos that you would like to share with us, please e-mail them to your local NWS. Include your name, date of the photo, where the photo was taken, and a description of the photo. Also indicate if you give the NWS permission to use the photo.

We are interested in ALL weather phenomenon and cloud types. The best photos or videos are those taken which show a wide view of thunderstorm structure. Close-ups are good, but they do not allow others to take in the bigger picture (no pun intended). It is this wider perspective that allows others to learn by seeing the structure of a specific phenomenon relative to that of the entire thunderstorm.

The End



Questions? Comments?

Kelly.Godsey@noaa.gov

Thank you for attending our spotter class!

If you would like to expand upon your experience, please consider taking the online spotter test. After completing the test, a certificate of completion will be available

http://www.srh.noaa.gov/tae/?n=spotter_test